A Lecture
ON THE
RHEUMATIC CARDITIS OF CHILDHOOD.

Delivered at the Hospital for Sick Children, Great Ormond-street, June 24th, 1892,

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GENTLEMEN,—The endo-pericarditis associated with rheumatism in children is by far the commonest of all the cardiac affections of early life, claiming no less than half of the whole number. The other half, mainly pericarditis, includes also a few examples of chronic valve disease and a yet smaller number of recent endocarditis apart from pericarditis. Thus the child's heart affections (congenital defects being excluded) are cast in two great divisions: one, peri-endocarditis, which is rheumatic, the other, pericarditis, owning a variety of causes, recent endocarditis by itself being so rare as hardly to count in the enumeration. But in giving to rheumatism a full half-share in the total of children's heart disease less than the truth is expressed unless a provision be added. Heart disease in the strictest sense is almost wholly rheumatic in these subjects. What remains applies to the heart's investment and is an accompaniment of morbid conditions wherein the pericardium sympathises, not with the endocardium, but with the neighbouring serous membrane of the lung. The two divisions are further distinguishable in the diathesis, the age, and even, to some degree, the sex that belongs to each. When, for example, we classify children's diseases as tuberculous and non-tuberculous, such a grouping applied to the heart would detach to the tuberculous side a large number of examples of pericarditis, but hardly one of peri-endocarditis. Cardiac affections in the strict sense are almost confined to non-tuberculous children, and almost always rheumatic. The peri-endocarditis of early life is in fact accurately and sufficiently described as rheumatic carditis. Similarly in regard to age. Such share as belongs to the tuberculous and is mainly pericardial will concern infants and young children. At a somewhat later age but still early comes pericarditis, related to pleurisy, to empyema, to pneumonia, sometimes to diphtheria and septicæmia. Later yet—that is to say, with the elder children—rheumatic peri-endocarditis (or carditis) becomes conspicuous; and last of all, when childhood is approaching its term, we get some glimpse of those after-results of cardiac inflammation which occupy so large a place in the heart disease of adult life.

As my authority for these statements and for what is to follow I put before you 100 cases of heart disease examined post-mortem at this hospital between June 28th, 1881, and April 3rd of this year (1892)—that is, for nearly eleven years. The cases are taken consecutively, congenital disease alone being omitted.[1]

One Hundred Fatal Cases of Heart Disease examined Post Mortem during Eleven Years.

Rheumatic (boys, 22; girls, 32)	54	100
Non-rheumatic (boys, 22; girls, 24)	46	

Ages of the Rheumatic.

Between two and four years	2	54
,, four and six years	4	
Six years	6	
Between six and twelve years	42	

Ages of the Non-rheumatic.

Four years and under	32	46
Between four and six years	5	
Above six years	8	
Age omitted	1	

Of the non-rheumatic, as you see, the great majority are infants and young children, while in the rheumatic the order of age is reversed, and it is the elder children that suffer most. The great majority of these are between six and twelve, pretty equally distributed. Below six there are but six children, and the two youngest of these are open to some doubt. As regards sex, it will be seen that the preponderance of girls is due almost solely to the rheumatic division. This extra liability to rheumatism on the part of females is, I believe, generally conceded, although in later life the greater exposure to weather on the part of men tends to obscure it.

The non-rheumatic heart affections of children, as has been intimated, are insidious in character and mostly consecutive to other diseases whose natural course they hardly modify. Thus purulent pericarditis sometimes accompanies empyema, but commonly remains undiscovered until death. Pericarditis may arise in the course of general tuberculosis, but it is a secondary and, in the circumstances, even an unimportant event, while the pericarditis of pneumonia, although sometimes discoverable in life, affords no particular indication for treatment and no great aid to prognosis. Of my forty-six non-rheumatic subjects empyema claims eleven (all of them children under six), tubercle has ten, diphtheria four, and pneumonia three. The rest are variously associated with meningitis, nephritis, and septicæmia.

Endocarditis, both new and old, occurring by itself is, as I have said, very rare. In the entire series of 100 cases it is found in but six, three rheumatic and three non-rheumatic. In two of the three reckoned rheumatic excess of fluid was found in the pericardium; the third was a case of old mitral disease in a child over eleven. In this case only was the pericardium normal. Of *recent* endocarditis, therefore, there is no single example amongst the rheumatic without participation in some degree on the part of the pericardium. As regards the three non-rheumatic examples of endocarditis, one is a case dying of diphtheria with "old thickening of the mitral," but no mention of the pericardium; the second is the case of a new-born child dying of pyæmia, and showing post mortem "vegetations upon the mitral and tricuspid valves," not further described; the third *is the solitary example of the whole six, and, moreover, it is the solitary example of the entire 100 cases exhibiting recent endocarditis of the mitral valve with no pericarditis and no excess of fluid in the pericardium.* Now observe, this same case was one of acute chorea, and it represents, as I believe and have elsewhere tried to show,[2] the condition of the heart proper to chorea apart from rheumatism. It is rarely observed, indeed, because fatal chorea is rare, and our post-mortem experience of it relates chiefly to the subjects of rheumatic heart disease.

It is not, however, my present purpose to discuss the non-rheumatic class of heart affections in children, made up as it is of examples having as little in common as empyema and diphtheria, chorea and tubercle. I desire rather to separate this miscellaneous group from the rest, so that the ground, being thus cleared, the features of rheumatic carditis may be the better displayed.

The general characters of the child's articular rheumatism, with which carditis so often concurs, are well known to you: slight fever, indistinct and fugitive joint affection, absence of prostration or of any abiding sense of illness. Such symptoms, though they may cover extensive heart inflammation, are not of a kind to excite the alarm of parents and not seldom pass unnoticed. What I would point out is the commonness of recurrence in child's rheumatism, or rather, let me say, the fact that the younger the subject the greater the liability to recurrence and the more closely are successive attacks crowded together. A child may encounter rheumatism once and, it may be, carditis therewith without permanent injury; but recurrent rheumatism—rheumatism that begins early and recurs often—is certain to cripple the heart, insomuch that by far the greater number of fatal cases, perhaps all did we but know, are of that kind.

The statement may need analysis. In the fifty-six cases of fatal rheumatic carditis on which I am now commenting thirty-five of the number had certainly had rheumatism more than once. In five others the rheumatic attack had been unusually prolonged, or, as is more probable, if we may trust our common clinical observation, a succession of attacks happening near together seemed like one. There remain sixteen, or, omitting two cases without history and three where the history is doubtful, eleven wherein fatal heart disease resulted, so far as the history could be trusted, from a single rheumatic attack of no long duration. A further analysis of this remnant of eleven out of fifty-six is noteworthy. In four of them the existence of aortic disease and

[1] The tables were shown at the lecture; abstracts only are here printed to save space.

[2] International Journal of the Medical Sciences, December, 1891.

of subcutaneous nodules made it at least likely that a previous rheumatic attack had passed unrecognised as such. In two, if not in three (there is some uncertainty), the children died, not of the heart disease, but of intercurrent affections. Thus a very small proportion of the fifty-six, some four or five, can safely be counted as victims of heart disease due to a single rheumatic attack. Nor would I surrender even these in view of the notorious fact that the joint pains of children when really rheumatic are not always assigned to that cause. It is certain that the vast majority of the fatal cases have suffered rheumatism more than once. It is not improbable that it is invariably multiple rheumatism that fatally affects the heart.

It is in the later attacks of rheumatic arthritis—as was shown at a demonstration here last March[3]—that physical signs in respect of the heart are most reliable. In a first attack there may be tumultuous action, mitral bruit becoming perhaps appreciably presystolic; exocardial sounds in great variety; reduplicated second, and even diastolic murmur at the aortic cartilage; but one and all of these morbid signs may disappear, and the integrity of the heart be maintained. Yet we cannot predicate that such will be the case until some time has intervened without return of rheumatism. With a second, and still more with a third rheumatic attack, there is far greater probability of permanent change and the establishment of the two main factors of organic disease in childhood—namely, mitral stenosis and pericardial adhesion. Apart from this consideration of probability derived from repeated attack, I do not know what physical signs there are conclusive of structural heart disease in children except prolonged blowing murmur, thrill and change in the heart's size and shape. Thus the chief contrast between the child and the man would be this—that in the former pericardial signs are far more frequent, while endocardial signs remain for a somewhat longer space of time of doubtful significance.

Nevertheless, the judgment we may form from physical signs is in fact less precarious than it would seem from these considerations taken alone. It must be added, first, that in rheumatism peri- and endo-carditis almost always go together, so that the presence of the latter may be inferred from the presence of the former; and, secondly (whether the information conveyed be precise or not is a point I am coming to), it is beyond doubt that pericardial sound in the circumstances we are considering signifies pericardial inflammation. However uncertain, therefore, the interpretation of recent endocardial murmurs, their character may be safely judged by the company they keep. The real difficulty is less in diagnosis than in prognosis. We may be certain that rheumatic carditis exists; we may, and in recent cases we often must, be uncertain whether such carditis will permanently cripple the heart.

I proceed now to a further point in regard to the diagnosis of rheumatic carditis and one which finds ample illustration in the table before you, though it leads to conclusions not a little surprising. It is this. Admitting that pericarditis has distinctive physical signs, how far may these be relied on to indicate from day to day the precise state of the pericardium, especially as regards adhesion? In the acute rheumatism of adults large trust is placed in physical signs as faithful witnesses of the progress and termination of pericarditis. The character, duration, and extent of friction rub, its advent, disappearance, and reappearance are all carefully noted and appraised, insomuch that when convalescence is reached a more or less confident opinion is expressed as to the probability of pericardial adhesion. Rarely, however, does the correctness of such opinion have to bear the test of actual inspection. Adults with acute rheumatism seldom die then and there. But the opportunity of verification thus denied to us in adults is afforded quite liberally by children—the opportunity, I mean, of seeing the physical condition of the inflamed pericardium so close to the time of hearing the noise it makes that sight and sound may safely be regarded as referring to one time. A large class of children, as I have said, are the subjects of multiple attacks of rheumatism in quick succession, each of which, while sparing or almost sparing the joints, will be attended by fresh carditis. After a number of such attacks the heart will sometimes very rapidly give in and the patients die of dyspnœa or pulmonary inflammation. It is of such children that my present collection is mainly composed, and to them I now appeal, in considering to what degree exocardial sounds inform us accurately of the condition of the pericardium.

[3] THE LANCET, March 19th, 1892

For some years past it has *not been my frequent experience* to find post mortem, notwithstanding that friction rub had been audible shortly before, sometimes loudly and over a large area, yet that pericardial adhesion was present, and in some cases extensive as well as firm. I at first inclined to the belief that such adhesions formed very rapidly in children. Further examination, however, compels the conclusion not only that to-and-fro rub may concur with extensive adhesion, but also that a great variety of exocardial sounds, variously described as "squeak," or "creak," or "scrape," are not inconsistent with intimate union of visceral and parietal pericardium. *With children dying after repeated rheumatic carditis, rubbing or no rubbing, it is the rule to find adhesion and the exception to find the heart free; while at the same time it is the rule to hear exocardial rub and the exception to hear none.*

In proof of this assertion I call attention to the table before you. The cases selected were all rheumatic and all with endocarditis, though for brevity's sake the condition of the endocardium may be neglected.

Case 1.—L. C——, aged eight, had "distinct friction," together with mitral murmur and thrill *fourteen days before death*. Post mortem the pericardium is described as "firmly and universally adherent."

Case 2.—M. F——, aged seven, had "loud friction" with thrill and double murmur at apex *when last examined shortly before death*. Post mortem pericardial adhesions were "extensive and firm, but new."

Case 3.—W. R——, aged ten and a half, had at first slight friction, which later (that is, *eight days before death*) was described as "definite friction." Post mortem the pericardium is described as "adherent all over and difficult to separate."

Case 4.—A. B——, aged eleven and a half, had "friction" *three days before death*. Post mortem the pericardium was "universally adherent by tough lymph."

Case 5.—H. D——, aged seven, developed friction rub while under observation, which was *audible up to death*. Post mortem the apex was "firm and organically united to the pericardium, which, however, was only partially adherent."

Case 6.—L. B——, aged eleven, had "excited heart action, friction and musical murmur at apex," *signs which lasted till death*. Post mortem the "pericardium was firmly adherent by a band of tough lymph." There were also some recent adhesions, but the right border was partly free.

So much for individual instances. Let me now estimate on a larger scale and from the same source the condition of the pericardium after death in relation to its living signs. The fifty-four cases of rheumatic carditis I am now dealing with may be divided into two classes, one where pericardial sounds were audible, the other where they were absent. The first or audible class may be again subdivided into (*a*) cases where exocardial sound is easily explained owing to the pericardium being roughened or lymph-covered yet not adherent and (*b*), strange to say, a larger class, where the existence of exocardial sound is less easily or not at all explained owing to the fact of pericardial adhesion in various degree, sometimes extensive and firm.

It thus appears not only that very extensive adhesion will often permit very obvious exocardial sound, but also, as I shall show directly, that we are not without examples of rough and lymph-covered yet not adherent pericardium, such as *ought*, as one is tempted to say, to yield sound, yet in fact yielding none. If we add that friction sound may possibly be present where there is no lymph and no roughness, and this is generally admitted, the simple teaching of the text-books that the successive stages of pericarditis may be followed by the ear from first to last seems to fade away with other delusions of youth.

Exocardial Sounds (a) *Audible and* (b) *Inaudible in 50 Cases*[4] *of Rheumatic Carditis examined post Mortem.*

(*a*) Exocardial sounds audible and of distinct rubbing character in	29
An extra sound audible over and above the endocardial, but not a distinct rub in	4

These 4 cases differ in no respect from the rest, but as the nature of the added sound in them may be deemed open to doubt they are excluded.

[4] The notes of 4 of the 54 rheumatic cases here analysed are defective or doubtful on this particular point.

Condition of the Pericardium in the 29 Cases above mentioned as furnishing Distinct Pericardial Rub shortly before Death, described in the words of the Post-mortem Account.

Pericardium is adherent "universally," "generally," "entirely," "everywhere," "universally and firmly," "extensively" in	15
Pericardium is "adherent and also to chest wall," "partly and recently adherent," "a few adhesions" in	5
Pericardium is not adherent, but there exists "pericarditis," or "roughened pericardium" or "shaggy cords" in	5
No adhesions mentioned (probably none existed) in	4

Thus, notwithstanding friction rub until near death, adhesion is firm and general in 15; less firm and less general in 4 or 5; and 9 only at the utmost are without or with slight adhesion.

(*b*) Exocardial sounds are inaudible in	17

Condition of the Pericardium in these 17 in the words of the Post-mortem Account.

Pericardium "adherent throughout" in	6
Pericardium "adherent at apex," "partially adherent," "firmly but partially adherent" in	3
Excess of fluid in pericardium in...	3
"Soft buttery lymph" in	1
"Recent lymph," "flakes of lymph," granular fibrin, "softly adherent" in	4

In 3 of the above cases classed as "adherent throughout," though there was no obvious exocardial rub, yet there was noted some extra sound of doubtful origin in addition to the endocardial murmurs. In one this is described as a "loud systolic whistling," in another as a "sibilant quality added to the murmur," and in a third as "a little musical systolic sound in addition to systolic and presystolic murmurs." Independently of these 3, however, we have here 7 cases of inflamed pericardium, 4 without and 3 with but partial adhesion, yet none of them yielding exocardial sound.

Putting the same facts in slightly altered shape, and omitting dubious cases where very partial adhesion might with equal probability be supposed either to admit of exocardial sound or to prevent it, it would seem that any precise diagnosis as to the condition of the pericardium derived from exocardial sound is just as likely to be wrong as to be right. Thus:—

1. Cases where, owing to the existence of inflammation, products described as "lymph," "granular fibrin" &c., the pericardium not being adherent, friction sound would have been expected and was heard. (Diagnosis correct.)	9
2. Cases of precisely similar character where friction sound would have been expected, but was not heard. (Diagnosis incorrect.)...	4
3. Cases where, owing to the extent of pericardial adhesion or to excess of fluid or softness of lymph, friction sound would not have been expected and was not heard. (Diagnosis correct.)	10
4. Cases of precisely similar character where pericardial friction would not have been expected but was heard. (Diagnosis incorrect.)...	15

So that diagnosis based upon absence or presence of exocardial sound would be correct in 1 and 3, that is, in 19; it would be incorrect in 2 and 4, that is again 19.

Upon the evidence now before you I take it for certain, explain the facts as you will, first, that pericardial adhesion does not prevent exocardial rubbing; and secondly, that the presence of such adhesion in fatal cases is much commoner than would be supposed judging from physical signs alone. Post-mortem observation, however, does not fully reflect the ways of life. What is true for those that die is not necessarily true for those who recover. Pericardial adhesion, in other words, may be a more sinister occurrence than we suppose, making sometimes the difference between living and dying. That wider question cannot be discussed with our present material, nor is it, indeed, determinable until the bearing of physical signs upon anatomical states as regards the pericardium has been more fully investigated and defined.

SANITATION AT BRADFORD.—The sanitary officers of Bradford have been instructed by the corporation authorities to require that in all new buildings water-closets shall be provided except where no suitable sewer is available for the drainage of such buildings.

A Clinical Lecture

ON THE

INTERSCAPULAR THORACIC AMPUTATION, WITH THE RECORD OF A SUCCESSFUL CASE.

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GENTLEMEN,—The interscapular thoracic amputation of the French surgeons consists of removal of the entire upper limb and the outer two-thirds of the clavicle. It may seem to you a formidable operation, but in actual practice, if certain steps are systematically followed, it will be found to be a straightforward procedure neither dreadful nor prolonged. In a rough-and-ready way, each surgeon proceeding in the manner most agreeable to himself, the operation cannot lay claim to novelty, for in 1808 an English naval surgeon, Ralph Cumming, removed successfully in the Greenwich Hospital for a gunshot injury the scapula, arm and clavicle of a sailor aged twenty-one years. He was followed in 1830 by Gaetani Bey at Cairo. Since then many other surgeons have placed upon record cases in which the operation has been completed for injury. It is not, however, my intention to consider in detail traumatic cases requiring such surgical interference, as every individual case is a law to itself, the operator having to shape and fashion the mutilated soft parts in a subject already in a state of profound shock. But cases of tumour in the vicinity of the shoulder offer entirely different features and in such a systematic plan with slight modifications can always be readily carried out.

George MacClellan of Philadelphia in 1838 claims to have been the first to have undertaken the operation to remove at one sitting the entire upper extremity for tumour, and according to Stephen Rogers[1] he is entitled to such priority. In Great Britain Mr. Syme, in 1863, was the first operator and he was followed in 1865 by Sir Wm. Fergusson, but, in both cases, previous operations had been performed upon the parts, for the former had removed the head of the humerus and the latter a portion of the scapula. Most of the surgeons who immediately followed them first disarticulated at the shoulder-joint, and then removed the scapula and a portion of the clavicle. The credit of systematising the operation, placing it upon an intelligent and scientific basis and demonstrating how to safely remove the whole limb *en masse* rests with Dr. Paul Berger, the eminent Parisian surgeon, who in 1882, as the result of his observations, suggested the performance of the operation by the following steps: 1. The middle third of the clavicle is resected by an incision carried along the bone from the outer edge of the sterno-mastoid muscle to its acromial extremity. 2. The subclavius muscle and adjacent soft parts are dissected back, the subclavian artery and vein external to the scalenus anticus muscle are laid bare, and each vessel is secured with ligatures in two separate places, making a division of both artery and vein between such ligatures. The object of this step is to preclude copious hæmorrhage and prevent air entering the subclavian vein when severed. 3. An anterior or pectoral flap is to be formed. This is accomplished by beginning the incision at the middle of the clavicular one and carrying it downwards and outwards across the anterior fold of the axilla to the inferior angle of the scapula. The integument is then reflected and the pectoral and latissimus dorsi muscles divided, together with the cords of the brachial plexus. The previous ligature of the main artery renders the proceeding practically bloodless. 4. The affected arm is drawn forcibly across the chest, and the patient, being placed at the edge of the table, is rolled over on to the sound side so as to allow the formation of a posterior or scapular flap. This is effected by commencing at the acromio-clavicular articulation, where the first incision terminated and carrying the knife downwards across the posterior axillary fold to meet the anterior incision at the angle of the scapula. The skin is reflected to the posterior border of that bone, the rhomboid muscles, the levator anguli scapulæ and the trapezius are divided and the

[1] American Journal of the Medical Sciences, vol. lvi., 1868.

limb taken away. At this stage some hæmorrhage may be expected, as the blood-supply is derived from the posterior and supra-scapular branches of the second part of the subclavian artery. It is, however, readily restrained by the pressure of a large flat sponge until pressure forceps and ligatures can be applied. If these steps be carefully carried out the flaps will fall together without tension, and as drainage is readily accomplished healing takes place rapidly, more so, in fact, than when an ordinary shoulder-joint amputation has been performed. When malignant neoplasmata have to be dealt with it is extremely likely that the integument, from which it is wished to form one of the flaps, is more or less involved and has to be taken away, so the ingenuity of the surgeon will be exercised to suggest some slight modifications of the skin incisions as may seem most suitable to the particular case.

The man before you, for the notes of whose case I am indebted to my house surgeon, Mr. Jerome, is twenty-one years of age, a groom by occupation, who was admitted into the hospital on May 16th, 1892, having noticed, five or six weeks before, a swelling on the right shoulder-blade, which he could not attribute to any blow or injury to the part. His general health had always been good, and there was no family history of malignant disease. On admission there was a tumour extending from the upper border of the right scapula, near the glenoid cavity, downwards to the lower angle and backwards nearly to the dorsal spines; it filled the axilla. In places, posteriorly, the skin was red and adherent to the growth, which was soft and semi-fluctuant to the touch, painless except

for some slight aching in the arm. The patient had been an inmate of another hospital, but after consultation had been dismissed as beyond relief by any surgical operation. On May 20th removal of the limb was effected as follows: the middle third of the clavicle was taken away and the third part of the subclavian artery secured with catgut ligatures. The corresponding vein was found to be enormously distended and in size equal to a large thumb, and to ligate it doubly was a matter of some little difficulty. As it was necessary to sacrifice a large portion of the skin which usually helps to form the posterior flap the anterior one was fashioned by commencing it at the tip of the acromion and curving it slightly forwards over the deltoid, then backwards to the axillary fold, and downwards to the inferior angle of the scapula. The posterior one began about the middle of the clavicle and was carried obliquely downwards to meet the previous one. After removal of the limb the flaps thus formed could be readily approximated except inferiorly, where a slight degree of tension resulted. A drainage-tube was inserted at the most dependent part of the wound. The after-progress was satisfactory, the immediate shock caused by the operation was soon rallied from, the pain experienced was slight, the constitutional disturbances hardly appreciable and on May 28th he sat up out of bed. Two days later the wound was reported to be healed throughout except at the lower angle where it was granulating. Up to the present time (three months) the man has continued in vigorous health.

After examining the tumour Dr. Ratcliffe reports: "It is a small, round-celled sarcoma springing from the infra-spinatus muscle, not attached to the bone, and at its outer margin undergoing cystic degeneration."

The advantages of following out this systematic method are: 1. Excessive bleeding is prevented by securing the main artery before any extensive division of the soft structures is commenced. Those parts with their blood-supply remaining unchecked are not dealt with until the last steps of the operation, when any bleeding can be readily and effectually restrained. Several instances are on record in which fatal hæmorrhage has resulted from the attempt to remove the whole limb without first securing the main artery.[2] 2. Air is prevented entering the subclavian vein. This accident has proved fatal in times gone by, both in traumatic cases and those undertaken for tumour. 3. Free division of the soft parts, as remote as possible from a malignant growth, is permitted, and any axillary deposits detected can be easily and visibly cleared away. 4. The flaps are readily approximated and the facilities afforded for the drainage of a large wound are excellent. Hence primary union, the absence of septicæmic complications, and a speedy convalescence may be anticipated.

CASES RECOMMENDED FOR OPERATION.

1. *For traumatism.*—Injuries in the region of the shoulder in which the vitality of the immediate structures is rendered doubtful. By removal of the scapula it may be that sufficiently healthy flaps are secured so as to render a speedy healing of the stump possible; whilst if disarticulation at the shoulder-joint be performed sloughing of the contused parts, increased risk of septicæmia, healing by granulation and a tardy convalescence may have to be reckoned with. If there be actually any slight increase of shock by removing the scapula, it is more than counterbalanced by the advantages of obtaining healthy skin for flap formation. Stephen Rogers,[3] in his report of eleven cases in which the arm and scapula had been forcibly torn off by machinery, shows that in all there was but little hæmorrhage, not much shock, and that recovery was apparently prompt. It must, however, be noted that most of the subjects were young people.

2. *For neoplasmata.*—A. *Simple:* Under this heading may be placed large osteo-chrondromata springing from the upper end of the humerus and involving the soft parts in their growth. Such cases have been successfully operated upon by Syme, Berger, Heron Watson and myself. In the last instance the ablation was performed in January, 1889, and the patient is still alive and well. B. *Malignant:* In cases of sarcomata or other malignant type of growth originating in the humerus, in the soft parts in the region of the shoulder-joint, or in any portion of the scapula, in which the axillary glands are already involved when the patient comes under notice I would urge that the interscapular thoracic amputation should be resorted to if any operation be undertaken.

Some of you may remember the case of a patient, aged fifty-two, who was admitted into the hospital on May 8th, 1891, suffering from a sarcomatous growth the size of a small Tangerine orange, springing apparently from the inter-muscular septa on the outer side of the lower third of the right arm and implicating the skin. Amputation of the arm was advised and declined. On July 4th he was readmitted, having since he left the hospital been treated by the local application of caustics by a "cancer-curer." It was then seen that there was a crater-like ulcer, involving two-thirds of the circumference of the limb, extending as high as the middle of the humerus. The bone was exposed and several severe attacks of hæmorrhage had taken place. The entire limb was œdematous and the axillary glands were enlarged. Amputation at the shoulder-joint by skin flaps was performed next day, and the axilla as far as possible cleared out. He left the hospital apparently well on Aug. 16th. Microscopically the tumour was found to be a mixed-celled sarcoma with a preponderance of round cells. In February of this year the patient was again admitted, as the cicatrix was involved in a recurrent growth which had ulcerated and seemed adherent to the scapula and chest wall. He com-

[2] Vide Table of cases by writer in the Medical and Chirurgical Transactions, vol. lxxiii.

[3] American Journal of the Medical Sciences, vol. lvi.

plained of excruciating pain, only alleviated by opium, and was urgent that some operative effort should be made for his relief. He had lost much flesh, and could only take a minimum quantity of food daily. It was pointed out to him that his present condition was not a satisfactory one for any operation; but as he elected to take all risks involved, on Feb. 16th I removed the scapula and two-thirds of the clavicle by Berger's method, getting well clear of the sarcoma, removing all the pectoral muscles that remained, and exposing the ribs, but having sufficient skin flaps left to cover in the stump. At the time of the operation there did not appear to be much shock, and the patient subsequently expressed himself as nearly free from pain. He was, however, very restless and vomited all nourishment, so that nutrient enemata had to be resorted to, but he died exhausted on the evening of Feb. 18th, sixty hours after the operation.

Dr. Ratcliffe's post-mortem notes say: "Body fairly well nourished. Operation wound nearly healed. No signs of secondary growth in the lungs, the thoracic walls or abdominal organs."

I have little doubt that at the time of the first operation the axilla was not efficiently cleared. Although to the feel all the affected glands appeared to be removed, yet probably some infecting nucleus remained, and the recurrence of the growth was rapidly apparent. A wider operation, accompanied as it would have been by a visible clearing of the whole axilla, would, in my opinion, have afforded the patient a better chance of permanent recovery. Youth is not to be considered an objection to the performance of the interscapular thoracic amputation when malignant sarcomata have to be dealt with.

In February, 1883, I removed the entire right scapula of a girl aged twelve for a periosteal sarcoma involving both surfaces of the bone. Hæmorrhage was free. Owing to the skin being involved there was hardly sufficient flap left to cover in the exposed surface, and the time occupied in the performance of the operation was as long as that needed for the major proceeding. The shock was great. The patient died the same day. At the necropsy infected axillary glands were discovered which had been overlapped during life by the primary growth, and so had escaped detection. In a similar case, with our present knowledge, I should remove the entire upper limb.

3. Mr. Frederick Treves[4] has advocated the performance of this operation in cases of "big arm" occurring late in mammary carcinoma, and reports a case in which, at least as a palliative measure, the immediate result was successful. An Italian surgeon, Domenico Morisani,[5] performed the operation for a breast cancer in March, 1885, upon a woman aged fifty-four; the entire upper limb, part of the clavicle, the mammary gland, and portions of the second, third and fourth ribs with their intercostal muscles being removed. Death resulted from shock, as the thoracic cavity was widely opened. The interscapular thoracic amputation and Berger's systematic method of performing it has only to be more widely known amongst English-speaking surgeons to meet with that recognition which I think its merits justly deserve.

A NEW METHOD OF EXCISING THE TWO UPPER PORTIONS OF THE RECTUM AND THE LOWER SEGMENT OF THE SIGMOID FLEXURE OF THE COLON.

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CHRONIC intestinal obstruction is usually met with in persons of advanced years, and the seat of obstruction is generally in the lower part of the large intestine. If the disease causing the obstruction invades any part of the gut from the stomach to the middle segment of the sigmoid flexure of the colon, it may be excised in the manner I have indicated in the March number of the *American Journal of the Medical Sciences*. I will now deal with cases of carcinomatous stenosis involving the rectum and the lower segment of the sigmoid flexure of the colon. Carcinomas invading the lower segment of the sigmoid flexure of the colon and the upper two-thirds of the rectum are tabooed by all practical surgeons as not amenable to radical treatment on account of their anatomical inaccessibility. All these cases are condemned to die either from the immediate effects of intestinal obstruction or, having been provided with an artificial anus in the loin or inguinal region, they are abandoned without hope to linger on for a few months until death relieves them from their loathsome condition. No operation has yet been devised for completely excising the rectum. Mr. Treves says, in his excellent "Manual of Operative Surgery": "Excision of the rectum or proctectomy is carried out in certain cases of malignant disease involving the anus or *lower part* of the rectum. The term is misleading inasmuch as the rectum is never excised, but only a comparatively small part of it. ..... Very rarely does the excised portion measure more than three inches in length." By experimental investigation I have ascertained that the semi-fixed condition of the upper three-fourths of the rectum is almost entirely due to peritoneal attachment; when this is severed it becomes an easy matter to invaginate any portion of it out through the anus where the diseased segment may be ablated and the continuity of the bowel restored in a surgeon-like fashion with little risk to the life of the patient. Before going any further I shall inquire into the relations of the peritoneal covering of the rectum in its normal condition. The upper three-eighths of the rectum in the adult is completely invested by peritoneum and is connected to the sacrum behind by a duplicature of that membrane called the "meso-rectum"; the length of the duplicature varies in almost every case. The middle portion is covered with peritoneum only on its anterior surface and the lower portion receives no peritoneal covering. On the posterior surface of the gut there is no peritoneum below a point five inches above the anus. What are the abnormal conditions commonly found in the peritoneal investment and what surgical affection is consequent on this abnormality? The upper portion of the rectum may have an abnormally long meso-rectum and the second portion may be completely covered with peritoneum and be connected with the sacrum by a meso-rectum. This abnormal condition is generally associated with true procidentia recti, where all the walls of the upper part of the rectum descend through the lower part and protrude outside the anus. This condition is a true intussusception. The only portion of the rectum fixed by the muscles and pelvic fascia is entirely below the upper limit of the levator ani, which is not more than an inch and a half from the anus. Above this point the straight gut is merely suspended by a reflexion of peritoneum. If the disease invades the lower third of the rectum the most satisfactory method of ablation is by a modification of Professor Verneuil's posterior dorsal incision, whereby complete sphincter power may be retained after the operation.

Should the disease attack any portion of the upper two-thirds of the rectum or the lower segment of the sigmoid flexure of the colon the procedure is as follows:—

1. For a few days previously to operating the patient is fed with small quantities of farinaceous food and beef-tea.

2. Night and morning the stomach and lower part of the rectum are thoroughly irrigated with hot water and salt (half a drachm to the pint).

3. The lower portion of the rectum and anus below the carcinoma is cautiously dilated with a small Barnes's bag or bivalve vaginal speculum, well greased with iodoform ointment.

4. The patient is kept in bed, and the surface of the abdomen and perineum is rendered thoroughly aseptic with nail-brush, soft soap, shaving and bichloride solution. Previously to operating the limbs and upper part of the chest are covered with wadding and the patient placed on a portable rubber operating mattress filled with hot water, as made to my order by Maw, Son and Thompson.

5. When thoroughly under the influence of an anæsthetic the patient is placed in the lithotomy position.

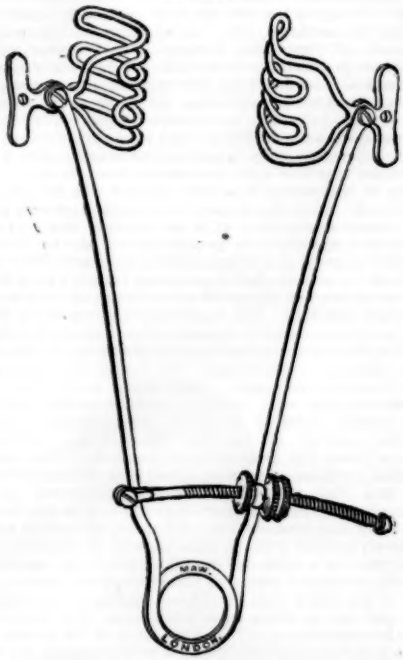
6. The assistant surgeon sits at the end of the operating table. He first divides the sphincter ani backwards towards the coccyx with a straight probe pointed bistoury and then passes a large bivalve vaginal speculum or Bruce Clarke's three-bladed bladder speculum through the anus up to the cancer. Holding the speculum in position he cautiously dilates the lower end of the rectum. The free division of the sphincter ani prevents the subsequent distension of the rectum with flatus and the possible tearing out of the circumferential sutures.

[4] THE LANCET, vol. ii. 1891.
[5] Il Morgagni, Agosto-Ottobre, 1885.

7. The bladder is now thoroughly emptied and a median abdominal incision is made down to the peritoneum from a point one inch above the umbilicus to the pubes. All bleeding having been stopped, the peritoneum is slit up to the size of the external wound.

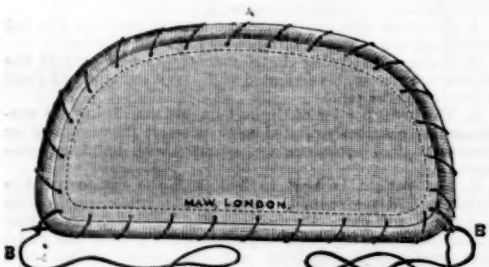
8. The edges of the wound are separated with a steel wire laparotomy speculum (Fig. 1) and the diaphragmatic intes-

FIG. 1.



tinal retractor, formed of a wire framework four inches wide and seven or eight inches long, covered with two or three layers of aseptic gauze, is placed in position. With a long-handled, slightly curved needle with an eye near the point two thick silk sutures are passed which are attached to the lower corners of the wire frame (Fig. 2) out through the walls of

FIG. 2.



A, Wire intestinal retractor or diaphragm, 7 in. or 8 in. long and 3½ in. to 5 in. wide; frame made of copper wire run through thin rubber tubing and covered with two or three folds of aseptic gauze. B B, Strong silk threads attached to the lower angles and border of the diaphragm.

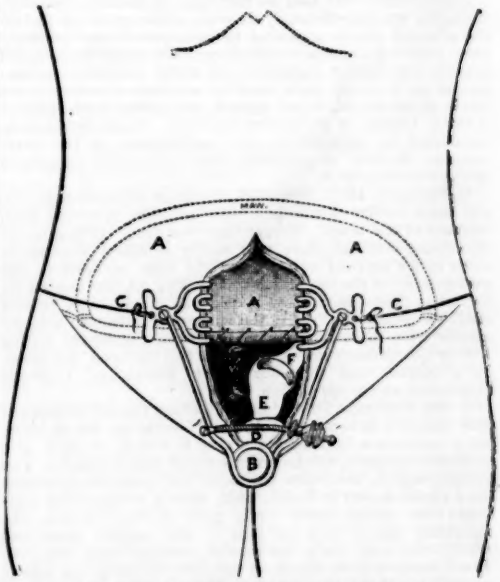
the abdomen on either side, immediately above the crest of the ilium and two or three inches externally to the outer border of the quadratus lumborum. The portion of gut to be operated on is isolated and the rest of the intestines are lifted out of the pelvis and tucked securely above the lower rim of the wire frame. The sutures are made taut and fastened to the laparotomy speculum. The diaphragm keeps the intestines warm and well upwards and backwards out of the pelvis. The operator has an unobstructed view of all the pelvic organs and is master of the situation. (Fig. 3.)

9. If there is an accumulation of fæces above the cancerous stenosis, it is gently pressed back into the colon with the fingers and thumb. The displacement of the fæces from the vicinity of the seat of operation greatly facilitates the subsequent artificial invagination of the diseased segment of gut.

10. With a long packing needle a piece of broad tape is passed through the proximal side of the cancer, first on one side and then on the other; the assistant then drags the ends of the tape out through the speculum with a sequestrum forceps. The broad loop of tape now lies across the proximal side of the diseased segment of gut.

11. A small incision with a tenotomy knife is made through the entire thickness of the peritoneal fold between the rectum and bladder in the male or the rectum and uterus in the female. The upper part of the rectum, held between the finger and thumb of the left hand, is drawn out from the sacrum so as to

FIG. 3.



A A A, Intestinal retractor or diaphragm lifting intestines upwards and backwards. B, Steel wire spring laparotomy speculum with screw regulator. C C, Silk sutures from the intestinal retractor fastened to the perforation in the laparotomy speculum on either side. D, Bladder. E, Rectum. F, Loop of tape across the proximal side of the cancerous gut.

render its peritoneal attachments taut. A pair of long probe-pointed angularly curved scissors (Fig. 4) is passed into the opening made with the tenotomy knife and the peritoneal attachment of the rectum is completely divided, first on the left side and then on the right. During the division of the lateral reflexions of the peritoneum it is imperatively necessary to keep the probe point of the lower blade of the scissors pressed well upwards and outwards from the median line of the gut against its inner surface. In this way, and in this way only, it is possible to divide the peritoneal duplicature which forms the meso-rectum without injury to the vessels, nerves and lymphatics of the rectum.

12. Provided the lower portion of the rectum is sufficiently dilated with the speculum, there is now no anatomical impediment to the invagination and complete prolapse of the upper three-fourths of the rectum out through the anus. The loose cellular tissue, with its contained vessels, offers no resistance. One or two vessels may be accidentally injured, but these can be easily dealt with in the usual way. No more of the peritoneal reflexion should be divided than is absolutely necessary to permit of the invagination out through the anus. The method I have advocated for peritoneal detachment applies with equal force to all parts of the colon. The inner reflexion of peritoneum requires most care in

division, as the vascular supply of the gut comes from that side. As the prolapse is drawn well down the blades of the speculum should be slightly approximated so as to permit of their easy withdrawal from the anus.

13. A catheter should be passed into the bladder to make certain that it is absolutely free.

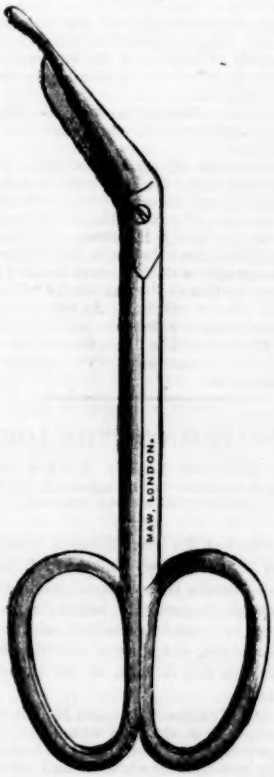
14. The prolapsed bowel is washed with warm, very dilute bichloride solution and a small incision made with a tenotomy knife through the entire thickness of the returning or middle layer of the intussusception and as near its apex as the disease will safely permit. The probe-pointed angularly curved peritoneal scissors are passed in through the opening made with the tenotomy knife, the prolapse being cut all round so as to completely free the entering or inner layer.

15. The inner layer is now pulled down with a vulsellum forceps until all the diseased portion appears completely outside or below the cut border of the returning or middle layer.

16. The inner and middle layers of the intussusception, about an inch above the disease, are transfixed with two fine long straight needles armed with chromicised gut.

17. The entering or inner layer is now amputated a full

FIG. 4.



half inch above the cancerous mass. Transfixing with long needles the entering and returning layers of the intussusception previously to amputation of the cancer prevents it from flying back inside, and ensures the proper relative position of the different layers of the bowel previously to sewing them up. The cancerous mass having been amputated, the needles are passed through and the sutures picked up in the middle of the invaginated bowel, divided and tied on both sides; the ends of the four sutures left long, so that an assistant can hold the cut ends of the bowel in position until it is plugged with absorbent wool previously to completely suturing it up circumferentially. Twelve passages of a long straight needle through both sides of the gut as above described suffice for the introduction of twenty-four sutures, which are generally sufficient. Nearly half an inch of the entire thickness of the coats of the gut should be included in each suture.

18. Before cutting off the four long sutures, the plug of absorbent wool is removed, the wire intestinal retractor loosened and a long tube is passed up the colon, which is washed out thoroughly with hot water and boracic or salicylic acid. All hardened fæces should be assisted along the colon by the fingers and thumb within the abdomen.

19. When the whole colon is thoroughly irrigated the sutured ends of the bowel should be dried with absorbent wool and painted over with Wœlfler's mixture of alcohol, glycerine and colophony, the same that he applies to the surface of the raw stump after removal of the tongue. The whole of the prolapse is now insufflated with iodoform and amorphous boracic acid and the bowel gently returned. The return of the circumferentially sutured bowel is facilitated by slight pressure from below and gentle traction from above. The rectal peritoneal reflexion which was divided is now sewn up with a few interrupted sutures to prevent any subsequent prolapse of the gut.

20. The laparotomy speculum and intestinal retractor are next removed and the median abdominal wound sewn up.

In this operation it is absolutely necessary to have two good assistants, one to administer the anæsthetic and another to assist in the invagination of the diseased segment of gut through the speculum. From aseptic considerations the laparotomist should leave this part of the operation entirely to one of his assistants. For the first day or two after the operation the patient should sip large quantities of hot water day and night. After the first few hours the patient gets to like it, as it allays sickness, disperses flatulence and helps to keep down the temperature by acting freely on the skin and kidneys. In extensive laparotomy cases I have had more success with hot water than any other remedy. After the first twenty-four hours the patient may be cautiously fed with small quantities of farinaceous food, chicken broth and whisky-and-water. If the carcinoma unfortunately has not been diagnosed early, and intestinal obstruction has been going on for some time, it may be deemed advisable to establish a temporary artificial anus in the left lumbar region, so as to thoroughly evacuate the colon, permit of its contraction to normal dimensions, and provide absolute physiological rest for that portion of the gut to be excised with the disease. Ten days after the excision of the cancer the artificial anus may be closed up by breaking down the parietal adhesions, sewing up the turned-in rarefied edges of the longitudinal opening in the descending colon and replacing it in its normal position.

For what pathological, anatomical or congenitally abnormal conditions of the lower end of the large intestine is this operation especially applicable?

1. Cancers of the upper two-thirds of the rectum and the lower segment of the sigmoid flexure of the colon.

2. Tertiary syphilitic ulcerations of the middle and upper portions of the rectum not amenable to medicinal treatment. This condition should be regarded as a new growth and excised as I have indicated.

3. Procidentia recti: this acrobatic accomplishment of the rectum is very common in tropical climates after an attack of dysentery. On three occasions I have seen the rectum completely turned inside out and the sigmoid flexure of the colon form the centre of the prolapsed gut. Cases of this kind not amenable to any medicinal treatment should be dealt with by median abdominal section in the manner I have indicated and the prolapse prevented with mathematical certainty by folding the meso-rectum upon itself in a direction parallel to the gut and fixing it in that position by silkworm gut sutures. This operation is much simpler, less dangerous and more effectual than that of McLeod of Calcutta or that of Roberts of Philadelphia. On two occasions I have seen Van Buren's method of linear cauterisation signally fail to prevent the subsequent invagination and prolapse of the rectum. The ablation of procidentia ani by the knife, the scissors or an écraseur of any kind, without median abdominal section, is a reckless surgical procedure, as a knuckle of small intestine may be herniated with the intussusceptum.

4. Congenital absence of the anus and the lower portion of the rectum. The child should be placed in the lithotomy position and a longitudinal incision made exactly in the median line over the site of the absent anus The dissection must be made slowly upwards in the middle line. If after careful dissection *in situ* the operator fails to strike the bowel, instead of making an artificial anus in the loin or groin which gives the infant no chance of ultimate recovery, he should perform median abdominal section, avoiding the umbilicus. Having found the end of

the colon and freed its peritoneal attachments with the probe-pointed scissors, as already described, it is pulled down to its normal position at the bottom of the true pelvis and sutured deeply to the skin and circumanal structures.

Professor Kraske's method of extirpating the rectum through the sacral region (posterior laparotomy) and Professor Rehn's modification of it are inadvisable, as they involve unnecessary mutilation of important anatomical structures. Dr. Axel Iversen of Copenhagen records nineteen cases of this operation with eight deaths. I have seen five cases operated on by three of the most expert surgeons in Europe and two of them died within a week from shock and fæcal infection.

In intestinal resection nature speaks with no uncertain voice. Ablation by invagination is the only method she countenances for the removal of any portion of the gut from the stomach to the anus. Decalcified bone-plates, tubes and the like makeshifts must be abandoned, and the silent dictates of nature, which are those of sound common sense, will be adopted. What general practitioner of large experience has not seen cases of prolapse of the upper portion of the rectum and the lower segment of the sigmoid flexure of the colon protrude at the anus? Every part of the colon from the ileo-cæcal valve to the end of the sigmoid flexure of the colon has been invaginated and the apex of the intussusceptum has protruded at the anus. Dozens of cases may be quoted where pedunculated lipomas have caused invaginations in every part of the large intestine—the polypus drags that portion of the intestine to which it is attached into the segment of the bowel below and it is always attached to the apex of the intussusceptum. Numerous cases of acute invagination have been reported where unassisted nature effected a cure by sloughing and elimination of the intussusceptum. In these cases the continuity of the gut is restored at the neck of the intussusception by firm adhesions before the intussusceptum sloughs off. Several cases are recorded where five or six feet of the ileum sloughed off in this way, and one patient lived seven months after the successful excision by nature of the cæcum, vermiform appendix and six or seven feet of the ileum. According to Mr. Treves spontaneous elimination takes place in about 40 per cent. of these cases.

In the performance of most pelvic operations I find the facilities supposed to be afforded by the adoption of Trendelenburg's position are to a great extent fallacious. Sponges only fill up the abdomen and do not retain the omentum and intestines in the position most convenient for the operator. Assistants' hands occupy too much room and are often in the way. In order to simplify the surgical technique of all operations in this region I have recourse to the use of a wire intestinal retractor or diaphragm, to be used in conjunction with the steel wire laparotomy speculum already alluded to. In cases of much intestinal distension, before inserting the wire retractor or diaphragm, I pass a fine trocar in one or more places and remove the flatus. On withdrawing the trocar I close the opening with a very fine curved conjunctiva needle and thread. The ease of performing all intra-pelvic operations increases with the size of the median abdominal incision. I never work in the dark when it can be avoided. To lessen shock, all cases of extensive abdominal section should be performed on a portable rubber operating mattress, filled with hot water; the patient is kept warm and to a great extent dry, as provision is made for carrying off the water where much peritoneal flushing is required.

During the years 1881 and 1882 I tried several methods of enterectomy and finally came to the following conclusions:—

1. Where it is necessary to excise any portion of the bowel for disease or injury from the stomach to the anus an artificial invagination should be made if it does not already exist, as in pathological irreducible intussuseption, and the invaginated bowel pulled out where necessary (it is unnecessary in the rectum and lower part of sigmoid flexure of colon) through a longitudinal slit made in the intussuscipiens, cut off, and the divided ends of the gut sewn all round with interrupted sutures, then withdrawn, and the longitudinal slit closed with a continuous suture. The perfection of this operation is best gauged by its simplicity and the universality of its applicability to all parts of the intestinal canal from the stomach to the anus.

2. Circular enterorrhaphy is a surgical poser which requires some solving. The operation of enterectomy which I have described is the only one yet devised where the perfect union by suture of a complete transverse section of the bowel, with its circumferential peritoneal surfaces in exact position and all the knots of the sutures on the inside can be accomplished. If the sleeve is torn from a coat it is sent to a tailor. What does he do? Does he attempt to sew it from the outside in the elaborately complicated fashion advocated in the text-books on intestinal surgery, only taking up a small part of the thickness of the cloth in each stitch? No. He invaginates the sleeve and sews it on circumferentially from the inside, passing all the stitches through the entire substance of the cloth. In this way, and in this way only, can a perfect juncture be made between the coat and the sleeve, and when the invagination is withdrawn none of the stitches can be seen from the outside. Firmly suturing all the coats gives great healing capacity to the cut ends of the gut and the stitches are not likely to cut out.

The Czerny-Lembert method of suturing the bowel causes great delay. The surgeon has to pick up carefully the peritoneal and muscular coat of the bowel thirty or forty times if possible without perforating the mucous coat. The double line of sutures may cause gangrene between the stitches.

4. Where enterectomy is performed for gangrene injury or intussusception, the distal segment of the bowel is generally the largest, but where the operation is performed for stricture, cancer or tumour pressing on or constricting the lumen of the gut, the upper or proximal portion is often much larger than the lower.

5. In circular enterorrhaphy all the interrupted sutures should be passed directly through all the coats of the gut, taking up a quarter of an inch of the cut ends of the bowel with each interrupted suture, so as to make a perfectly air and water tight juncture.

6. This rapid and effective method of suture does not interfere in the slightest with the subsequent perfect permeability of the gut.

7. There is less risk of septic peritonitis following this method of suturing than the long and tedious method of taking up the serous and muscular coats from the outside.

8. In circular enterorrhaphy external sutures are not alone unnecessary but positively injurious, as they materially increase the time and the subsequent risk of the operation.

9. A continuous suture should never be used inside or outside a transverse section of the gut for the following reasons. Its diameter is always varying. As the stitches would not all cut out simultaneously they are apt to form loops inside the intestine, which would be liable to catch or be dragged or torn out by the onward movement of the contents of the bowel.

Stanhope-gardens, S.W.

MALFORMATIONS OF THE LOWER LIP.

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MALFORMATIONS of the lower lip are so rare that it may be worth while to note the cases that have from time to time been published. Beside those alterations in the shape and size of the mouth—imperforate mouth, macrostoma &c.—which are hardly to be reckoned as true malformations of the lips, there are clefts, outgrowths and depressions of the lower lip as distinct and definite as are the different forms of ordinary harelip.

1. *Median cleft of the lower lip.*—Dr. Hamilton has recorded this malformation in a child, in whose family were several cases of ordinary harelip. The child also had talipes equino-varus. The lip was cleft for about a third of its depth; the edges of the cleft were of the colour of the mucous membrane of the lip; its angles did not present the rounded tubercles so often found in clefts of the upper lip. Dupuytren mentions a case of "median fissure of the lower lip and lower jaw," and Fergusson has figured the defect in his "Progress of Anatomy and Surgery." Mr. Bland Sutton gives the case of a child in whose lower lip was a median cleft having between its edges a dermoid growth; and Dr. Walker has reported a median cleft of the lower lip of a calf, with a cleft of the jaw and of the tongue.

2. (*a*) *Hypertrophy of the mucous membrane.*—In a case under Mr. Bryant's care an infant had an outgrowth of indurated mucous membrane on the right half of the lower lip; and in a case under Mr. Clutton a woman with cleft palate had also a triangular fold of mucous membrane on the inner surface of the lower lip in the middle line, and at the base of the fold were two small pits in the lip, like the openings of sinuses.

More often the hypertrophy is of that form which French surgeons have called "lèvre double" or "bourrelet labial"—a long fold of mucous membrane lying behind the lip and resembling it in shape. This fold may exist in either lip, or in both; in the upper lip it is interrupted by the frænum, in the lower lip it is uninterrupted the whole length of the lip. It is hidden when the mouth is closed, and the patient may at other times keep it out of sight by sucking it back; but it is made conspicuous by contraction of the orbicularis, as in laughter. Lips thus deformed are apt to become dry, cracked and ulcerated, and their unsightly aspect may, as in a case recorded by Dr. Wright, be the cause of grave mental depression. Inside these folds the hypertrophied labial glands can be felt: small shotty nodules, the size of hempseeds. In some cases this form of hypertrophy of the mucous membrane is not truly congenital, but is due to an unusual length of the frænum of the lip, which has caused the patient to have a habit of sucking and fidgeting the lip with his tongue; in other cases the hypertrophy of the labial glands may precede and cause the hypertrophy of the mucous membrane which enfolds them. But in other cases it appears to be a true congenital hypertrophy of mucous membrane, such as occurs also under the tongue. In all cases the only treatment is free removal of the whole fold and of the glands contained in it, and care must be taken that all glands cut across in the line of section or lying in the wound be also removed.

(*b*) *Hypertrophy of the whole lip.*—M. Buisson's statement that this form of hypertrophy is more common in the lower than in the upper lip is not supported by the records of these cases, at least as regards congenital hypertrophy. Mr. Davies-Colley has published a case of enormous hypertrophy of the lower lip in a man of thirty-six, but this was due not to congenital overgrowth, but to irritation from syphilis and from smoking. Dr. Buck, however, has recorded the case of a man whose lower lip had been abnormally large from birth; he had also a nævoid stain on the chin and cheeks. The lip had been made worse by repeated exposure to cold and was at the time of observation a soft pendulous mass more than twice the size of the upper lip. I can find at the time of obstruction no cases of congenital cystic enlargement—"lymphangioma"—of the lower lip. The cases quoted here were treated with complete success by excision of a wedge of tissue from the whole length of the lip.

3. *Sinuses of the lower lip.*—This curious malformation of the lower lip, so closely allied to common harelip as to alternate with it through different members of the same family, is perhaps to be explained by comparing with it the following case published by Dr. Hamilton. An infant with double harelip, one of a family in which there had been several cases of harelip, had on its lower lip, which was loose and prominent, two small symmetrical papillæ, like little nipples, growing from the red edge of the lip. These papillæ fitted exactly into the clefts of the harelip above them, so as just to fill them when the mouth was shut.

In close relation to Dr. Hamilton's case is a case published by Professor Madelung, of an infant with double harelip and cleft palate, on whose lower lip were two papillæ the size of a pin's head. These papillæ lay buried in minute culs-de-sac in the lip, from which a mucous fluid could be pressed out, derived from the glands of the mucous membrane which lined the culs-de-sac.

These two cases show two stages of the same malformation. In the first case the papillæ stood up from the lip, and fitted closely into the clefts in the upper lip. In the second case they were retracted, as the nipples of the breasts may be retracted, so that they lay in little pits or culs-de-sac on the surface of the lip. If now the papillæ be further retracted they will disappear altogether, leaving two sinuses or saccular depressions in the lip, lined with mucous membrane. These sinuses have been noted by several authorities. The cases are as follows:—

1. A girl, who also had talipes equino-varus, a divided nail on the great toe, a web of skin in the popliteal space, and a double harelip and cleft palate, and had sinuses on the inner aspect of the lower lip, one on each side of the middle line.—Trélat.

2. A boy with double harelip, whose father also had harelip, had on the front of his lower lip two slits leading into two small saccules under the mucous membrane on the inner aspect of the lip. They secreted, especially at meals, a clear viscid neutral fluid.—Arbuthnot Lane.

3. A girl had on her under lip, which was full and fleshy, two crescentic openings near its free edge, admitting a large probe for half an inch and secreting glairy mucus.—Jardine Murray. The girl's history was as follows:—Father's mother, palate very high and narrow; father, double harelip, culs-de-sac in lower lip; first child (female, the patient), culs-de-sac in lower lip; third child (female), double harelip, culs-de-sac in lower lip; fifth child (female), palate very high and narrow; seventh child (male), webbed fingers; eighth child (male), harelip, culs-de-sac in lower lip.

To these three cases others might be added. M. Dépaul had one where, as in Professor Madelung's case, there was a small red granulation at the bottom of each cul-de-sac. M. Demarquay found in three families ten cases; nine of them had also harelip. Professor Madelung quotes other cases. He observes that the flow of mucus may be so free as to be troublesome, that the fibres of the orbicularis form a sort of sphincter round each opening that a fine ring of skin has been noted round them, and that the culs-de-sac, usually convergent, were in one case divergent.

If treatment is needed it is not enough to lay open the culs-de-sac; they must be cauterised or dissected out.

The explanation of this deformity is plainly to be found in its constant association with harelip. If the lips of the fœtus were closed while their curves were being formed any cleft in the upper lip would leave room for a corresponding upgrowth of the lower lip, as in Dr. Hamilton's case, in the same way as the curves of the two feet fit into each other in those cases of talipes which are due to the interlocking of the feet in utero. In Dr. Hamilton's case these upgrowths remained unaltered at birth; in Professor Madelung's and M. Dépaul's cases they were retracted as the nipple of the breast may be retracted; in the other cases they were wholly retracted and smoothed away, leaving behind them only the invaginated mucous membrane. In the same way, along the lines of the branchial clefts, one case may present an outgrowth, another a sinus or a mere pit in the skin.

Wimpole-street, W.

THE IMPORTANCE OF OBSTRUCTION TO THE OUTFLOW OF URINE AS A CAUSE OF PUERPERAL ECLAMPSIA.[1]

BY W. GIFFORD NASH, F.R.C.S. ENG.

THE theories as to the methods of production of albuminuria and eclampsia in pregnancy are many. Amongst others they have been attributed to vaso-motor anæmia of the kidneys due to reflex irritation of the pelvic plexus of the sympathetic nervous system, to alterations in the renal circulation due to the rhythmical contractions of the uterus, to increase of the general arterial tension, to a hydræmic state of the blood, and quite lately a bacillus is said to have been found. Scant justice has been done to the mechanical element in the question. By this I do not mean pressure on the inferior vena cava and renal veins, which many writers have suggested as the cause, but which can only act in the later stages of pregnancy, and which would produce congestion of the kidneys, whereas anæmia of the kidneys is the usual condition found on post-mortem examination of women who have died from eclampsia. I would, however, point out how pressure on the ureters, bladder and urethra may cause albuminuria and eclampsia, and how many, if not all, of the symptoms preceding and accompanying the fits may readily be explained when examined from this simple mechanical point of view. The majority of writers have almost entirely neglected pressure on the ureters and the consequent production of hydro-nephrosis and later chronic interstitial nephritis. There is, however, one prominent exception. Galabin,[2] after referring to the greater frequency of eclampsia in primiparæ and the influence of pressure on the abdominal viscera in producing it, says: "Pressure on the renal veins is not the only thing to be considered. There is another mode in which pressure comes into play, which has been scarcely included among the theories of the causation of albuminuria, which are enumerated by authors. I refer to pressure upon the ureters which is exercised by the pregnant uterus even in the earlier months of pregnancy. It is known to pathologists that in the

[1] A paper read at the annual meeting of the South Midland Branch of the British Medical Association on June 16th, 1892.

[2] Brit. Med. Jour., vol. ii. 1880, p. 698.

case of fibroids of no great size some dilatation of the pelves of the kidneys and flattening of the apices of the pyramids may be found. The more temporary enlargement of the uterus in pregnancy is not likely to leave such manifest changes. But the secreting cells of the kidneys must do their work against greater pressure and with more difficulty, and so be more liable to functional irritation and disturbance." I believe, however, that pregnancy may cause the manifest changes in the kidneys and ureters mentioned above, for amongst the post-mortem changes found in these cases Herman gives dilatation of the ureters and pelves. Another writer (Winckel) says he does not think pressure on the ureters the cause of eclampsia, as he has often found dilated ureters in pregnant women who have not had any sign of eclampsia. One might as well argue, as some have done, that renal disease does not cause eclampsia because some women with chronic Bright's disease escape it. This statement of Winckel's that hydro-nephrosis is often found in pregnant women is strong evidence of pregnancy being able to cause it.

Let us consider what is the cause of eclampsia. I think we shall come to the same conclusion as Spiegelberg,[3] who says: "The renal disorder is by far the commonest cause; it includes all the worst outbreaks of the disease. I think therefore I shall not go wrong if I, broadly speaking, only regard that eclampsia as puerperal which is due to intoxication of the constituents of the urine." To what constituent of the urine is this intoxication due? Playfair[4] says: "The convulsions of eclampsia are due to toxæmia resulting from the retention of urea in the blood." I think we must go further and agree with Spiegelberg that uræmic intoxication depends on the retention in the blood of all the substances which should be excreted by the kidneys.

In pregnancy we have to consider the fact that the fœtal urine has to be excreted by the mother's kidneys, and this may perhaps account for eclampsia being caused by the pressure of a pregnant uterus on the ureters, whereas it is not caused by the pressure of uterine fibroids or large solid ovarian tumours. In twins this factor would be doubly important, and we shall see presently that eclampsia is especially frequent in twin pregnancies. There seems to be no doubt that urine is secreted by the fœtal kidneys during the latter half of intra-uterine life, and that the urine passes into the amniotic fluid, whence it finds its way into the maternal circulation and has to be got rid of by the maternal kidneys. This would throw an extra strain on them, especially if there were any obstruction to the outflow of urine. The evidence derived from the occurrence of hydro-nephrosis in the fœtus shows that the kidneys of the fœtus are active. The conclusions arrived at by Henry Morris[5] on this point are (1) that the urine is secreted in considerable quantity during the last four months of intra-uterine life; (2) that the quantity is too great to be stored up in the fœtal passages; (3) that the urine secreted passes into the liquor amnii; (4) that the quantity of urea in the liquor amnii is small, but in the later stages of gestation it is fairly constant; (5) that the presence in the liquor amnii of urea and other constituents of normal urine gives support to the inference drawn from cases of congenital hydro-nephrosis—viz., that the liquor amnii is in part composed of urine of the fœtus. Spiegelberg,[6] writing on the same subject, says: "The liquor amnii always contains albumen, and almost always urea, especially during the later months. The urea is unquestionably derived from the kidneys of the fœtus. A portion of the urea passes back into the maternal circulation, either directly or after undergoing decomposition. In cases where the fœtal urinary passages are occluded or kidneys absent the amount of liquor amnii is almost always extremely small." Granting that eclampsia is in the majority of cases due to deficient elimination by the kidneys, let us see how this is brought about.

Eclampsia occurs in pregnancy, during labour, or shortly after it. In pregnancy it is rarely seen before the sixth month—i.e., not till after the uterus has risen out of the pelvis and is able to compress the ureters at the pelvic brim. Cases occurring before the fourth or fifth month may be accounted for by the uterus being retroverted or retroflexed, and if we look at the description of retroversion of the gravid uterus in Playfair's work we shall easily understand how retention of the constituents of the urine may be brought about. He says:[7] "Retroversion of the gravid uterus shows itself about the fourth month. The first sign is generally some trouble with micturition in consequence of pressure on the urethra. The bladder may be enormously distended, cannot be emptied, and is constantly dribbling. Sometimes the obstruction to the discharge is so great as to lead to dropsical effusion into the cellular tissue of the arms and legs. Retention of urinary elements may take place and death occur with all the symptoms of uræmic poisoning." Obstruction may also be due to retroflexion, for amongst the causes of hydro-nephrosis given by Morris, Newman, and Fagge are pregnancy, prolapsus and retroflexion of the uterus, the latter of which causes bending or kinking of the ureters as they pass by the neck of the womb. After the fourth month the ureters can be compressed by the pregnant uterus, which pressure goes on increasing until delivery, and with it the liability to eclampsia. During labour, when eclampsia usually occurs, the head of the fœtus in its passage through the pelvis exerts great pressure on the pelvic contents, as is shown by the occurrence of retention of urine caused by the pressure of the urethra against the pelvic arch, and also by the sloughing of the vaginal walls, which leads to the formation of fistulous communications with the bladder and rectum.

We must next notice the important part pressure plays in the production of eclampsia. All observers are agreed that eclampsia is very common in cases where the fœtal head is large or the pelvis contracted, in twin pregnancies and in primiparæ. In fact, Lantos[8] found that 78 per cent. of his cases of eclampsia were primiparæ. In J. G. Swayne's practice[9] the percentage was 66 and at Guy's Hospital 60. Observers agree that the reason for the frequency amongst primiparæ is the greater tension of the abdominal muscles and therefore greater pressure on the abdominal viscera. For the same reason the subjects are often strong, robust, young adults. In a discussion at the Obstetrical Society of London in 1887 Herman said he did not think increased pressure was the sole cause, but believed it was one of the causal conditions, and that this view was supported by the rapid diminution in the quantity of albumen in the urine which always follows delivery. In cases where the fœtal head is large or the pelvis contracted labour is prolonged and the ureters are more exposed to prolonged pressure and severe bruising. In cases of twins the exciting cause is not merely the great size of the uterus, for in hydramnios eclampsia is not unusually frequent. This may be due to the greater pressure of the fœtal parts in cases of twins and also to the maternal kidneys having to get rid of the urinary products of the two fœtuses. In cases of hydramnios we must remember that the hydramnios itself may be due to a deficient absorption of the liquor amnii, which is largely composed of fœtal urine. Large ovarian cysts would resemble cases of hydramnios which are not prone to eclampsia. The cases of eclampsia occurring after delivery are usually very slight and pass off speedily. They are difficult to account for mechanically, unless we can suppose that the ureters are bruised during labour and become temporarily blocked. Let us next consider the premonitory symptoms of eclampsia and compare them with the symptoms of hydro-nephrosis. Spiegelberg says: "They consist mainly in sensory and gastric disorders and œdema of the face and limbs; headache, vertigo, depression, ill-humour, amblyopia or true amaurosis, dyspepsia, nausea and vomiting."

With these let us compare the symptoms of hydro-nephrosis, permanent or temporary, as given by Morris and Newman. Morris mentions "dry sallow skin, nausea, vomiting, constipation, convulsions, febrile symptoms and coma"; and Newman, "severe pain in the renal region, sickness, nausea and vomiting, dimness of sight, severe and persistent headache and lethargy, with or without paroxysms of excitement. With regard to œdema, Spiegelberg[10] says it is an especially suspicious symptom when it affects the hands and face. Frequently it is only transitory, appearing in the morning after the woman has been lying, and disappearing in the course of the day. The cause lies in the alteration of the pressure relations by posture. The explanation of this is that in the recumbent position the gravid uterus presses on the ureters and iliac vessels, but in the upright position the weight is thrown more forward.

As we have seen above, according to Playfair general

[3] Text-book of Midwifery, vol. ii., p. 204.
[4] Ibid., vol. ii., p. 285.
[5] Surgical Diseases of the Kidneys, p. 233.
[6] Text-book of Midwifery, vol. i., p. 101.
[7] Science and Practice of Midwifery, vol. i., p. 236.
[8] Brit. Med. Jour., vol. i. 1889, p. 87.
[9] Bristol Med. Chir. Journal, March, 1891, p. 3.
[10] Text-book of Midwifery, vol. ii., p. 660.

œdema may be caused by pressure of the retroflexed gravid uterus on the urethra. If obstruction to the urethra can produce it, why not obstruction to the ureters? The œdema is doubtless due to the deficient excretion of urine. If we inquire what is the mechanical effect of pressure on the ureters, we find that several experiments have been made with a view to showing what happens when a ureter is suddenly or gradually blocked, so that the pressure in the pelvis and ureter becomes equal to that in the renal bloodvessels. Fagge,[11] quoting Herman, showed that in dogs the secretion of urine ceased to appear entirely under a pressure of 2·4 in. of mercury, and that when pressure is removed a large quantity of watery urine is poured out in which a very little urea is present. He also states that in obstructive suppression there is no anasarca, which does not agree with Playfair's observation that retroversion of the gravid uterus by pressing on the urethra may cause general œdema. He also mentions a case in which a young man, after five days' suppression, voided a large quantity of albuminous urine; this passing of albuminous urine after relief of pressure may explain some cases of albuminuria appearing after delivery and after eclampsia. He also says that "most observers now think that the cessation of the activity of the kidney as soon as the pressure in the ureter and renal pelvis reaches a certain point is apparent rather than real, the urine being really secreted but reabsorbed as fast as it is formed. In support of this I find an experiment of Bennett May's[12] in which water injected into the ureter with a little force passed through the kidney into the renal vein. Bennett May, in the same paper, quotes an opinion of Russell,[13] to the effect that "the secretion of urine ceased as soon as pressure was equalised," and another of Alexander James, who said "the secretion pressure of the urine is not sufficient to cause any marked dilatation of the ureter in case of sudden complete obstruction, but is so where the obstruction is partial or gradual." Newman[14] made an experiment to show how far the rapidity of the circulation through the kidney depended on the tension of fluid in the uriniferous tubules. The conclusion he arrived at was "that when the tension of fluid in the tubuli uriniferi increases the amount of urine secreted diminishes, and when it becomes equal to the arterial tension the secretion ceases, and the circulation through the Malpighian body may be stopped altogether by collapse of the arterial coil when the pressure outside is greater than that inside the vessel. This explains how by damming up the urine atrophy of the substance of the kidney may be produced as a result of insufficient blood-supply, seeing that most of the cortex is nourished by capillaries arising from the efferent vessels of the glomeruli."

These experiments and conclusions would suggest (1) that the gradual pressure of the pregnant uterus on the ureters may produce a gradual dilatation of the ureters and pelves of the kidneys; (2) that the pressure of the pregnant uterus during labour on the ureters may completely arrest the secretion of urine (or if the urine is secreted it is again absorbed by the kidney), and this pressure would not produce any dilatation of the pelvis of the kidney or uterus or marked naked-eye change in the kidneys themselves; (3) that the anæmia of the cortical portion of the kidneys found post mortem by Spiegelberg and Boxall in women dying of eclampsia may be caused by the pressure of the urine in the uriniferous tubules, as explained by Newman's experiment; (4) that albuminuria may follow when pressure on the urinary passages is relieved, as happens in delivery.

We must now turn our attention to the urine. Spiegelberg[15] says: "Except in rare cases it is highly albuminous, contains an abundance of renal epithelium, frequently the so-called fibrin casts and not uncommonly blood. In several patients the proportion of urea has been found to be remarkably diminished. Further, in all serious cases the amount of urine is very small, and then the secretion is always dark, contains much albumen, epithelium and numerous casts, sometimes blood cells. On the other hand, the bladder may be quite empty for hours at a time; there may be complete anuria." Compare this with the urine in hydro-nephrosis, in which affection, according to Morris, total, partial or intermittent anuria may exist, and the urine may contain albumen, blood, pus, epithelial cells and casts, and be deficient in urea.

With regard to albumen it may or may not be present. Eclampsia may occur without albuminuria. According to Spiegelberg[16] such cases are very rare. He says: "Renal incompetency may develop very rapidly, and the urine would of course be previously quite free from albumen. If it gradually becomes albuminous it is hardly enough to prove that the albumen is the result of the convulsions; it is much more likely the result of the interruption of the renal circulation—a result of the alteration in the bloodvessels." Is it not possible that this alteration in the circulation may be produced by distension of the uriniferous tubules? Newman's experiment proved that distension of the tubules caused anæmia of the glomeruli and collapse of the coils of bloodvessels in them. The albuminuria may also follow the removal of obstruction, as in the case quoted by Fagge. In the discussion on eclampsia at the Obstetrical Society in 1887 Cleveland expressed the opinion that deficiency of excretion of urea was of much more importance than the presence of albumen. Further, some cases occur in which there is never a trace of albumen throughout. Spiegelberg relates such a case, and regards it as one of eclamptiform convulsions due to reflex irritation in the case of the bladder. I quote it in full because I think it is the best proof possible that eclampsia can be caused by obstruction to the outflow of urine from pressure. "The parturient woman was at full term and a primipara. She was seized with the first paroxysm twelve hours after the somewhat premature discharge of the liquor amnii, the second occurred soon after the arrival of the medical attendant. Owing to the head lying low down in the pelvis and to its compressing the urethra, he was unable to evacuate the greatly distended bladder, but extracted the head with the forceps. The accumulated urine immediately gushed forth (a sufficient quantity was drawn off with the catheter) and proved to be entirely free from albumen. The child lived. There was no return of the paroxysms, and the lying-in woman rapidly recovered."

There are many evidences of the pressure of the gravid uterus on the pelvic organs as it enlarges. The bladder is more irritable, the desire for its evacuation far more frequent and its capacity diminished. The anterior vaginal wall may be drawn up by the uterus and drag on the neck of the bladder. In the later weeks retention of urine may be due to the presenting part of the child pressing the neck of the bladder against the symphysis. Pressure on the large nerve trunks and plexuses causes cramps. Pressure on the iliac vessels causes œdema and varices of the thighs, buttocks, rectum and generative organs, and when we consider the relation of the ureters to the common iliac vessels we can easily understand how they can be compressed at the same time. What evidence can we gather from post-mortem appearances? Spiegelberg says: "There is a moderate degree of renal mischief and even the kidneys may appear to be healthy, with the exception of insignificant changes"; and in another place, "the kidneys are usually pale and bloodless." Galabin[17] says: "The changes in the kidneys may be slight and hardly discoverable, but if they recur in repeated pregnancies they may lead to chronic Bright's disease of the granular variety. The changes which have produced granular kidney may have begun as the epithelial or tubular form of nephritis." Boxall[18] says: "In fatal cases the cortical portion of the kidney was pale and anæmic and the pyramids congested." Herman says: "The post-mortem changes were of the most various kinds—viz., acute nephritis, large white kidney, granular kidney, dilatation of ureters and pelves and no naked-eye appearance of kidney disease." We see from these descriptions that Spiegelberg and Boxall agree as to anæmia of the cortex being found as a rule. This can be explained by Newman's experiment as being due to pressure on the glomeruli of urine dammed up in the uriniferous tubules. Cases of chronic Bright's disease, of course, are predisposed to eclampsia, as the kidneys already are defective in eliminating the urinary poisons. Dilatation of the ureters and pelves (Herman) must be caused by obstruction to the outflow of urine, as also may be granular kidneys. Lastly, with regard to treatment, if pressure on the ureters is an important and frequent cause of eclampsia, relief will follow its removal; and this is so, for the fits always quickly cease and albumen disappears after delivery. Also, if the patient is placed in the prone position the weight of the uterus is

[11] Fagge's Principles and Practice of Medicine, second edition, vol. ii., p. 671.
[12] Brit. Med. Jour., vol. i. 1883, pp. 108, 109.
[13] Medical Times and Gazette, 1879.
[14] Surgical Diseases of the Kidneys, p. 117.
[15] Text-book of Midwifery, vol. ii., p. 208.
[16] Ibid., vol. ii., p. 216.
[17] Brit. Med. Jour., vol. ii. 1880, p. 698.
[18] Ibid., vol. ii. 1887, p. 1335.

taken off the ureters, and this we find has been recommended by Routh.[19] In a case in which he adopted it convulsions at once ceased, owing to pressure being removed from the kidneys. Graily Hewitt, too,[20] "had observed good results from placing the patient so as to take off the pressure of the uterus from the spinal region."

The conclusions arrived at are: 1. Eclampsia is due to retention in the blood of all the substances which should be excreted by the kidneys. 2. This retention may be due to obstruction to the outflow of urine. 3. Eclampsia in the early months of pregnancy may be caused by retroversion of the gravid uterus causing obstruction to the outflow of urine by pressing on the urethra, or by retroflexion of the uterus causing kinking of the ureters. 4. Eclampsia during the later months can be caused by pressure of the gravid uterus on the ureters at the pelvic brim. 5. Eclampsia during labour can be caused by pressure of the fœtal head on the ureters and on the urethra. This is especially likely to happen (*a*) in primiparæ, (*b*) in cases of twins, (*c*) in cases of contracted pelvis and (*d*) when the fœtal head is large. 6. There is an additional factor besides pressure, which is the urine secreted by the fœtus, which, passing into the maternal circulation, throws an increased amount of work on the kidneys.

Bedford.

ENTERIC FEVER; LEFT HEMIPLEGIA; RECOVERY.

BY G. P. NEWBOLT, F.R.C.S.ENG.

THE following case may, I think, prove interesting to the readers of THE LANCET, a similar case having been recorded on April 23rd, 1892.

A. M——, aged twenty-one, fireman on a locomotive, came to my surgery on Sept. 30th, 1891, complaining of severe headache, vomiting and malaise. I ordered him to bed, and saw him again on Oct. 2nd. I then suspected enteric fever, and had him removed to the hospital at Ellesmere Port. He was a weakly-looking man of small stature, and never had suffered from any severe illness. His temperature at noon was 103°; pulse 100; skin dry and hot; bowels relaxed, the motion being fetid and of a pea-soup nature; abdomen full, but not tender; tongue foul and covered with white fur; heart sounds normal. He had been ill for ten days altogether. His pulse being soft and easily compressible, he was put on half an ounce of whisky every four hours.—Oct. 6th: Spots came out, and were well marked over the abdomen.—8th: The patient has a troublesome cough, and there is some congestion of both lungs at their bases. Bowels very loose; sordes on teeth and lips; expression of patient rather anxious. Spleen can be made out. Respiration 24; pulse 120; temperature 105·2° last night. No pain on pressure in abdomen. From this date until Oct. 19th he did well, his temperature on the morning of that day having dropped to 99°. The patient took his nourishment well, and his bowels were not so relaxed. He then relapsed.—23rd: Not so well. Diarrhœa more troublesome again, and temperature rising steadily.—26th: Evening temperature 105·5°, pulse 120. Bowels very loose; he was much exhausted. The whisky was increased to half an ounce every two hours.—Nov. 3rd: During the last week the temperature has never fallen below 101°. Bowels not quite so loose. He takes nourishment fairly well. Pulse very soft and dicrotic. He does not cough much; has slight frothy expectoration; the spleen is felt under the border of the ribs.—6th: Very little change. The temperature keeps up, and the patient is very low and delirious; he hardly recognises anyone, and passes his motions and urine under him.—8th: He seems almost moribund, but swallows fairly well; diarrhœa less. Is put on half an ounce of whisky every hour; beef-tea and milk *ad lib.*—10th: On visiting him I found that there was loss of power in the left arm and leg. He cannot speak plainly, and does not protrude his tongue quite straight; the right eyelid drops and he does not swallow so well. He seems to know when spoken to. Temperature at 6 A.M. was 98·6°; at 6 P.M. it was 102°.—11th: A slight fall in the temperature. The patient is in much the same condition and can just manage to swallow.—13th: Slight hæmorrhage from the bowels; given an enema of turpentine and opium.—16th: There have been several small hæmorrhages. Temperature is lower and the patient swallows better and is more conscious.—17th: Temperature is from normal to subnormal; the patient is very collapsed, but is improving and takes his nourishment better; pulse 120; tongue cleaner; diarrhœa less; is very delirious at night. Takes egg and milk and half an ounce of whisky every three hours.—23rd: Left arm quite useless; no grasp; leg cold and immobile; protrudes tongue to the left; cannot whistle or close right eye completely; mouth remains partially open; can articulate and is much more sensible. There is loss of sensation in arm and leg.—30th: Power returning in leg, and he complains of pain in the limb; he can flex the limb and thus raise the knee from the bed. The arm is still almost useless.—Dec. 4th: He is steadily improving. Paralysis is disappearing. Is allowed some solid food. There has been no diarrhœa for a fortnight and no rise of temperature.—10th: Was allowed to leave the hospital. Can get along with crutches for a short distance, but is still very peculiar in his manner and restless at night.—Jan. 28th, 1892: Looks very well and is getting fat. Paralysis disappearing.—Feb. 15th: Can whistle and close the eye and mouth almost perfectly. The grasp of the left hand is not very good, but the arm has not wasted. Sensation is perfect. The peroneal muscles of the leg are wasted and painful, giving rise to a slight amount of talipes varus, which makes him walk in an awkward fashion, and he drags the leg.—22nd: He started work, and says he feels perfectly well. The leg is in much the same condition. There is still much loss of power in the arm.

I imagine the cause of the hemiplegia in this case to be due either to blocking of one of the cerebral arteries with a portion of a clot from the heart, due to the low condition into which the patient had passed, or by thrombosis *in situ*. I never for a moment expected the man to recover. The case was one in an epidemic occurring in this district during the autumn of 1891.

Ellesmere Port, near Chester.

REMARKS ON BURNS AND SCALDS.

BY FRANK GRANGE, M.D.LOND., D.P.H.CAMB., M.R.C.S.,
LATE ONE OF THE HOUSE SURGEONS TO THE BLACKBURN AND EAST LANCASHIRE INFIRMARY.

I HAVE to thank the surgical staff of the Blackburn Infirmary for the use of cases having reference to the above subject.

Apart from special occupations the season of the year for burns appears to be on the wane,[1] for of 120 in-patient cases 62 per cent., and of a still larger number of slight burns two-thirds, were found to occur in the six winter months. At the above institution, with an average of about 8 fatal cases yearly, four inquests on burns were held between Christmas Day and the end of January last, all of which were unconnected with special "employment" and three of them were "fireplace" accidents. Thus one man gave a history of alcoholic sleep over the fire as the cause. This connexion of burns with the "winter fireside" is made more prominent when these are contrasted with "scalds," for of 80 of the latter an equal number occurred in the summer and winter months, a reference to the uniform demand of the culinary art throughout the year being an obvious explanation. Out of 146 unselected cases of slight and severe burns and scalds (over ten years of age) there were nearly twice as many males as females. This is due to the fact that "occupation"—e.g., "mining"—accidents are included, the severe cases being proportionately more common in males. Out of 32 deaths, 12, or more than one-third, were under six years of age, and 8, or about one-fourth, were between six and twenty-one years of age, more than a third being after the twenty-first year ("occupation" burns not being excluded). Of 34 deaths, 10, or not quite a third, occurred in the first twenty-four hours after the accident; one-half of these were under the age of five years, the remaining accidents being exceptionally severe; 16, or not quite half of these cases, died within forty-eight hours; 10, or not a third, died between the second and fourteenth day. One patient died on the eightieth day. It is an important point that in cases fatal between the second and fourteenth day, while in adults and older children pulmonary symptoms and post-mortem

[19] Ibid., vol. i. 1886, p. 496.
[20] Ibid., vol. ii. 1886, p. 1335.

[1] This was written in March.

signs are as a rule prominent, in younger children nervous symptoms, such as delirium, convulsions, and in a boy of six years tetanus, are common and have sometimes correspondingly suggestive post-mortem signs. For instance, in 2 recent fatal cases with cerebral symptoms a yellowish-grey fibrinous (?) ante-mortem clot occupied the longitudinal sinus at the necropsy. The great prognostic import of extent of surface involved, pre-eminently in young people, has long been insisted on. A writer in the "International Encyclopædia of Surgery" allows that "if one-half or even one-third of the surface has been burned or scalded death is inevitable." Mr. Bryant says: "When more than half the surface of the body is injured a fatal result generally takes place, and in the young and old all burns and scalds of any extent are serious." By carefully dividing the surface of the body as nearly as possible into proportional fractional parts and then by calculation from measurement and visual judgment of recent cases of burn or scald post mortem an approximate result of some prognostic value should be obtained.

I beg to acknowledge the critical judgment of the senior house surgeon, Dr. Wheatley, and a few professional friends in suggesting the following as a rough estimate only of the proportionate surface areas of the body. Taking the arms as together equal to 2, we have: Arms = 2; legs = $\frac{5}{6}$; trunk = $\frac{7}{8}$; head and neck = 1. I have applied the above method and figures to four recent cases of deaths from burns.

The first case, a well-nourished boy of two years, was admitted on Dec. 22nd last, with burn from the first to fourth degrees of the following approximate extent: Half of left abdomen to angles of ribs and loins; half of left leg and less than one-fourth of both arms. From these proportions it may be calculated that not one-seventh part of the surface was involved, and yet the boy died in sixteen hours after the accident, notwithstanding stimulant treatment. It should be mentioned, however, that the effect of a warm bath was probably injurious.

In the second case, a healthy boy of eight years was burnt by a coal falling from the fire. Approximately one-fourth (upper part) of both legs, one-eighth of right arm, three-eighths of the whole trunk from the first to fourth degrees, and the genitals were involved. A convulsion of the face and arm, unconsciousness and pyrexia to 102·5° occurred on the second day, and he died on the fourth day. The necropsy showed a fibrinous, presumably ante-mortem, clot in the longitudinal sinus. It may be calculated from the above that less than one-fourth of the surface of the body was here involved.

The third case was that of a healthy child of about five years, admitted on Jan. 17th with about a quarter of the right abdominal surface and two-thirds of the right thorax, with corresponding back and rather more than half of the right upper extremity involved. There was also a slight burn over the right ear and corresponding part of the face. Death occurred on Jan. 18th. It may be calculated that probably not more than one-fourth of the entire surface of the body was involved.

The fourth case was that of a man aged twenty-four years, whose left hand and forearm were burned to the fifth degree, the upper arm and two-thirds of left side of thorax to the third and fourth degrees, while the right arm had a slight burn on it when admitted. This patient died in the fourth week after the accident. Disintegration of the stomach was found at the post-mortem examination, but no duodenal ulcer. In this case we may compute that probably not one-sixth of the surface of the body was involved.

From the foregoing remarks the following conclusions are suggested:—1. That burns to the third and fourth degrees are frequently fatal when not a fourth of the entire surface is involved. They are probably often fatal in young children when not a seventh of the entire surface is affected. 2. That since "shock" appears to be such an important factor in these results—even when death occurs after the second day—the "warm bath" treatment recommended by authorities is in the case of those unused to baths distinctly contra-indicated during the first forty-eight hours as tending to increase the shock. This applies especially to children. 3. That the great proportionate fatality in children may be partly explained by the fact that in them the shock to the nervous system falling largely on the medullary and emotional centres expends itself on parts essentially organic and of vital importance, which parts are in no way reinforced, as in adult life, by the later yet less vital (?) cortical controlling centres.

Southampton.

HEPATIC ABSCESS.

By G. HARRISON YOUNGE, F.R.C.S.I.,
SURGEON-CAPTAIN, ARMY MEDICAL STAFF.

IN THE LANCET of July 25th, 1891, under the above title, there is an article by Surgeon-Captain W. A. Morris, in which he dissents from the now universally accepted rule that we should treat abscesses of the liver on exactly the same lines as we treat collections of pus in any other organ or tissue of the body. It is to be regretted that Surgeon-Captain Morris did not state more fully his reasons for objecting to what is now an established rule of surgery. No one who has a practical knowledge of hepatic abscess will dispute his statement that "it is by no means easy, except in very few cases, to absolutely detect the presence of liver abscess, much less its locality." Difficulty in detecting any given disease is not, however, a valid reason for declining to operate when it has been recognised. Experience in India has taught me that almost the only chance of saving the life of a patient who is suffering from an abscess of the liver lies in opening the abscess freely, and draining it thoroughly. The arguments in favour of this line of treatment are overwhelming. When pus has once formed in the liver it increases, at least in India, with startling rapidity. An abscess which contains but an ounce or two of pus may in a fortnight involve almost the entire liver. By operating early we prevent such an untoward result; while, at the same time, we operate on tissues that have not been undermined, and before the constitution has been damaged by septic absorption. If the operation is deferred until fluctuation becomes evident, and the constitutional symptoms well-marked, a large amount of the liver substance will be destroyed, and this must of necessity prolong the process of cicatrisation, even if does not render recovery impossible. Delay in operating also exposes the patient to the risks of hectic fever and perhaps pyæmia. If an expectant plan of treatment is adopted the abscess may burst into the pericardium or peritoneum, either of which events would be immediately fatal. Even when an abscess is discharged through the lung, which was formerly regarded as the most favourable route for its evacuation, recovery only takes place after prolonged suppuration and considerable destruction of the lung tissue, which will leave the patient's constitution more or less damaged for life.

While stationed in India I invariably adopted the following line of treatment and can most strongly recommend it. As soon as an abscess was suspected the patient was at once placed under chloroform and the liver explored with the smallest sized needle of an aspirator. Before being used the needle was always allowed to stand for some time in strong carbolic lotion. A small puncture having been made through the skin with a bistoury over the suspected site of the abscess, the index finger of the right hand was placed over the thick end of the needle, and it was taken up in such a way that it remained full of carbolic lotion. The needle was then passed into the liver through the puncture made with the bistoury. If pus was not detected the needle was withdrawn and inserted in another situation. The liver was thus carefully explored in different directions until either an abscess was detected or until it was evident that such did not exist. If pus was found the exploring needle was at once withdrawn and an incision made along its track down to the liver. A bistoury was passed along the track of the needle until it entered the cavity of the abscess. The bistoury was then withdrawn and the opening enlarged to about an inch by Hilton's method, so as to avoid all danger of hæmorrhage. When the dressing forceps were withdrawn a drainage-tube was inserted and the abscess cavity syringed out with carbolic lotion (1 in 50). The greatest care was of course always taken in dressing the operation wounds, so as to keep them thoroughly aseptic. While any discharge continued the abscess cavity was syringed out at least twice daily and the drainage-tube was never removed until all discharge had ceased for some days, as otherwise it was found that the abscess was certain to refill.

When an abscess can be opened posteriorly a single opening is usually all that is required. When, however, it has to be opened anteriorly perfect drainage is impossible through a single opening. If such only is made pus is certain to accumulate in the abscess cavity, and to cause hectic fever

and perhaps pyæmia. In these cases the only hope for the patient is to make a counter-opening at the most dependent part of the abscess. The drainage-tube should be passed into the abscess cavity through the upper opening and then brought down through the lower one. There is scarcely an operation in surgery which gives greater or more immediate relief than that of freely opening and fully draining an abscess of the liver. Indeed, in an acute hepatic abscess an early operation is almost as urgently required as it is in a case of strangulated hernia. In a chronic abscess the necessity for an early operation is not so urgent, but even here success depends mainly on early and free drainage. Few surgeons would suggest that an abscess of the knee, for instance, should be allowed to remain unopened until the structures composing the joint are disorganised. Then why recommend this method of dealing with an abscess of the liver?

Station Hospital, Colchester.

A CASE OF
APPARENT DOUBLE LABYRINTHINE DEAFNESS,
WITH AN INTERVAL OF THREE MONTHS BETWEEN THE ATTACKS; NO EVIDENT CAUSE.

BY T. REUEL ATKINSON, M.R.C.S. &c.

THE patient in this case is myself. My age is thirty-five; family history good; parents both alive, each aged seventy-five; no previous illness since infancy except bilious attacks; have never had syphilis. About the second week of December last I noticed a singing noise in the right ear, and, after a few days, in addition observed vertigo and an uncertainty of gait, so that I had at times a difficulty in keeping on the pavement. I also feared Ménière's symptoms. About this time, too, certain dull pains at the back of my head supervened, which I judged to be rheumatic, having had similar pains from time to time for the last three or four years, and due, as I thought, to the effect of the rain beating under my hat when driving. For this I took five grains of quinine three times a day for about a week, after which the pain, vertigo and tinnitus all left me. About a week afterwards, on the morning of Dec. 27th, I got out of bed apparently quite well, and had shaved, and washed myself down to the waist, and was briskly rubbing myself dry with a rough towel when suddenly I became very giddy, was instantly sick, and a violent singing started in my right ear. I at once lay down on the bed and soon after noticed that I was deaf on the right side. I have never had any trouble with my ears before, no earache or catarrh or discharge of any sort. I stayed in bed a week, during which time the nausea and giddiness passed off, but the deafness and tinnitus remained, and continued for the next three months with but little, if any, improvement. I was able to get about and do my work fairly well, but was obliged of course to give up the use of the binaural stethoscope. One morning about three weeks after the attack I awoke to find I saw "double," and there was a blurring of vision with diplopia all day, passing off again towards night. On no other occasion have I noticed any errors of vision. Towards the end of March I began to develop certain nervous symptoms. These consisted mostly of an indescribable feeling, apparently starting in the epigastrium and gradually spreading thence all over the body down to my finger tips, these latter occasionally becoming numb and feeling as if "asleep." At the same time there was often a feeling of chilliness with a slight increase of temperature, one night rising to 100·2°. These attacks came on several times a day and occasioned a mental impression as of "fear" and a depression of spirits, leading often to tears. Sometimes these attacks occurred as I was driving along country roads, the horribly curious sensations then running down to my toes. I have no words to express the feeling. I started on a course of strychnine, bark and nitro-hydrochloric acid, and continued taking this with evident improvement till April 4th, when I walked five miles to see a patient and had not felt so well for months.

On the following morning, April 5th, another attack, almost identical to the one experienced on Dec. 27th, took place. I had just returned from the bathroom after taking a tepid bath, and was commencing to dress, when suddenly, as before, giddiness came on; I vomited, a loud tinnitus started in my left ear and I found I was now deaf on both sides, but worse on the left. As before, the nausea and giddiness passed off with a few days' rest in bed. I at once commenced injections of pilocarpine, which I continued for the next three weeks, but with no benefit. I then went to London and consulted some of the leading members of the profession, but could not hear of a case exactly similar to mine, although one very like it had been published in THE LANCET some months previously by Dr. Ferrier. In that case there was a specific history to fall back upon as a possible predisposing cause. I have been advised to try various methods of treatment and I have already given a trial to bromide of potassium, salicylate of soda, hydrobromic acid and blisters behind the ears, besides the pilocarpine. I am now trying iodide of sodium with liquor hydrargyri three times a day and bromide of potassium with compound spirit of ammonium. I am not able to suggest the slightest cause for the first attack. I have never had any special head injury beyond what might arise from an occasional fall from time to time whilst following the hounds. My habits are in all points strictly temperate. As a possible predisposing cause to the second attack there is the fact that my nervous system was from some obscure cause evidently disorganised. I suppose I may consider that on each occasion I have had an effusion into the internal ear.

I should feel extremely obliged to any medical man who may happen to have met with such a case in his practice if he will privately communicate with me on the subject. I should be particularly glad of any hints as to prognosis or treatment. Might influenza, not noticed and not treated and followed by more or less peripheral neuritis, account for these symptoms without any positive effusion into the labyrinth? My present condition is—Membrana tympani: fair. Eustachian tube: open to valsalva. Eyes: accommodation 10"; vision normal: ophthalmoscopically normal.

Sherborne, Dorset.

Clinical Notes:
MEDICAL, SURGICAL, OBSTETRICAL AND THERAPEUTICAL.

CASE OF INTUSSUSCEPTION; GANGRENE; DEATH.

BY CECIL ROBERTSON, M.B., C.M. ABERD.

ON Thursday, June 30th, 1892, I was called to see A. B——, a male infant aged six months. The child had always enjoyed very good health from its birth till about three weeks before I was called in, when it fell out of its perambulator, and since then, although not appearing to have received any injury, it seemed to suffer more or less abdominal pain. On Monday, June 27th, the child was seized with vomiting, accompanied by a good deal of paroxysmal pain in the abdomen and absolute constipation. This continued without intermission till I was called in on June 30th. The child was then very low; the pulse frequent, small and fluttering, the tongue dry and brown and the urine scanty and high coloured, while very fetid blood-stained mucus was being passed per rectum. On inspection the abdomen was found to be slightly distended and a sausage-shaped swelling could be felt to the right of and below the umbilicus. As the typhoid condition of the child and the passage of the blood and mucus seemed to point to gangrene of the inverted portion, it was decided not to open the abdomen or perform inflation. The child's strength was maintained by frequent small doses of strong beef-tea and brandy-and-milk. On Tuesday, July 5th, the child passed per anum a piece of intestine rather larger than a postage stamp, very discoloured and fetid. This was followed on the same day by four stools, and for the next ten days a motion was passed at least once a day and of firmish consistence, the general condition of the child improving meanwhile. The vomiting entirely ceased, the tongue became moist and clean and the child seemed likely to do well. On Saturday, the 16th, however, a change for the

worse occurred. The abdomen became enormously distended and coils of intestine could be seen through the abdominal walls. My partner, Mr. Dickinson, very kindly came and saw the case with me and we decided to puncture the intestine. Accordingly we selected the most resonant spots and introduced a large hypodermic needle, and were able to give vent to a large quantity of flatus, which greatly relieved the patient for the time being, but for the time being only. The punctures were repeated three or four times with varying success, the child gradually becoming weaker and weaker until it died on July 27th.

In my absence Mr. Dickinson made a post-mortem examination when the following condition of things was revealed. On opening the abdomen he found the small intestines enormously distended with flatus and containing a fair quantity of fluid fæces. The seat of the strangulation was easily detected. It was at the most usual point—the ileo-cæcal valve. About two inches of small intestine had passed into the cæcum, forming a tense sloughing mass which quite occluded the lumen of the large gut. Adhesions had formed between the peritoneal surfaces of the entering and returning layers. It was seen that no amount of traction or squeezing would reduce the inversion—at least, no amount that could have been used with safety during life.

Remarks.—This case is interesting, if only from the length of time the child lived from the time symptoms of gangrene set in—four weeks. The cessation of urgent symptoms and the subsequent occurrence of stools for ten days after the passing of such a small slough certainly led me to hope that recovery was likely to take place by natural means, rare as that is; but the supervention of peritonitis complicated matters so much and put such a severe strain on the child's already over-taxed vitality that it succumbed before the remaining slough had time to separate.

Southfields, S.W.

UNUSUAL OCCURRENCE IN LITHOTOMY.

BY SURGEON-MAJOR D. CHARLES DAVIDSON,
INDIAN MEDICAL SERVICE; CIVIL SURGEON, SATARA, INDIA.

ON Feb. 9th last a Hindoo (male) aged about twenty-three was admitted into the Civil Hospital, Satara, suffering from the usual symptoms of vesical calculus, and on the sound being used the ordinary evidence of stone in the bladder was elicited. The man stated that about four months previously a small twig had been inserted into his urethra and that in attempting its withdrawal it broke, and a portion still remained in the urethra. On Feb. 11th lateral lithotomy was performed by me and the foreign body removed from the bladder. What had given out the ordinary sound of a vesical calculus was found on examination to consist of seven inches and a half of a small twig about the thickness of a No. 5 catheter, doubled up several times and forming the centre of an elongated calculus, chiefly phosphatic. The patient made a good and uninterrupted recovery. The manner in which the foreign body had been introduced, or the reason for its insertion, could not be clearly elicited from the patient, and I had reason to doubt his statement regarding the length of time it had remained unremoved. Such cases are somewhat rare, this being the first of the kind met with by me in a large number of lithotomy cases.

HERTS CONVALESCENT HOME.—At the annual meeting of the friends of this institution, held last week at Elsenham Hall, Bishop Stortford, a favourable report was presented by the hon. secretary. During the past year 616 patients were admitted into the Home, showing an increase of 40 over the number receiving aid during the previous year. The income, including fees derived from patients, amounted to £2464.

HOUSE SANITATION.—At the Marylebone Police-court, a few days ago, the owner of a house in Dartmouth-park-road was charged before Mr. Hannay with allowing the premises to remain in an insanitary condition. The tenant had occupied the house since June last, and several of his family had suffered from ill-health owing, it was alleged, to defective drains. This condition was verified by tests applied by Dr. Sykes, the medical officer of health. The magistrate inflicted the penalty of £5, and required the defendant to proceed with the necessary repairs at once.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se compare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

KING'S COLLEGE HOSPITAL.

RETRO-PHARYNGEAL ABSCESS IN A CHILD; TRACHEOTOMY; INCISION; RECOVERY.

(Under the care of Mr. ALBERT CARLESS.)

THIS case serves to draw attention to the advantages o the incision first practised by Professor Chiene and brought by him before the annual meeting of the British Medical Association some two years ago. All surgeons are not agreed as to the advisability of employing this incision, for we read in Heath's Dictionary of Surgery:[1] "The simpler plan of opening it in the mouth has the advantage of easily allowing a sequestrum to be removed. The writer does not think the advantages of the external method commensurate with its difficulty of performance and more serious character." It is very difficult to satisfy oneself before opening as to the extent of these abscesses, especially when there is cervical caries, for they not infrequently extend into the posterior mediastinum, and we have published a case in which the cavity of the abscess extended down to the diaphragm.[2] To open these bone abscesses through the mouth increases the liability to a fatal result, if it does not directly induce it. We have also published notes of a case under the care of Mr. Gray,[3] in which a retro-pharyngeal abscess was complicated with and obscured by subacute laryngitis. Tracheotomy was performed for the relief of the latter before the former was discovered. In many cases the dyspnœa will probably be relieved when the abscess is opened, and no further laryngeal complications be met with. Mackenzie, however, describes a case in which secondary disease of the cricoid developed. These abscesses may require treatment at any age. Schuppert and Hambursin met with them in infants of three months old, and we have recently seen one opened by the method which Mr. Carless employed (only on the right side of the neck as first performed by Professor Chiene) in a man aged sixty-seven.

D. C——, aged one year and seven months, was admitted on July 18th, 1892, at 11.30 P.M., suffering from urgent dyspnœa. The history given was that the child had recently been an in-patient at another hospital for a bad cough, that it had only been discharged a few days, and the mother thought it had caught cold and assigned this as a cause for the present symptoms. There was also some discharge from the ears and a swelling had been noticed a few days previously just below the left ear. It was supposed that the dyspnœa was due to a blocking of the pharynx by much enlarged and inflamed tonsils; but the house surgeon, Mr. Ramsay, on looking at the throat, found a large median swelling completely blocking the fauces, and on examining this with the finger it was found that the posterior pharyngeal wall was bulged forwards by a soft elastic mass, evidently an abscess. Tracheotomy was at once performed to relieve the dyspnœa, the child, however, ceasing to breathe as the operation commenced. Artificial respiration was commenced as soon as the tube was in place and maintained for a few minutes, when the child breathed naturally and easily and the cyanosis disappeared.

July 19th.—Mr. Carless saw the child at 3.30 P.M. It was then breathing comfortably in a tent, the air of which was warmed and moistened by a steam kettle; the physical condition at the back of the pharynx remained unaltered. The abscess was opened under chloroform by Professor Chiene's method. An incision was made behind the left sterno-mastoid an inch and a half in length, extending downwards from a little below the apex of the mastoid process. Several enlarged glands presented and one or two were removed; the tissues were much matted together by inflammatory exuda-

[1] Vol. i., p. 346.
[2] Taylor: THE LANCET, vol. i. 1876, p. 74.
[3] THE LANCET, vol. ii. 1876, p. 46.

tion. The posterior border of the sterno-mastoid was carefully defined, and the muscle drawn forwards by a retractor until the transverse processes of the second and third cervical vertebræ could be distinguished. By palpation through the mouth the portion of the abscess most accessible from the wound was felt for, fluctuation being clearly obtained between the two hands. A pair of sinus forceps was now pushed through the deep fascia just in front of the transverse processes and directed behind the pharynx towards the abscess. By opening the forceps this puncture was enlarged sufficiently to allow the finger to be inserted, and by this means the abscess was opened, several drachms of creamy pus being evacuated. The anterior surfaces of the bodies of several cervical vertebræ could be distinguished, but there was no bare bone and no evidence of vertebral disease. A drainage-tube was inserted and the wound stitched up.

20th.—Wound dressed; looking very well; discharge merely serous and none to press out. The child cannot breathe comfortably without the tube, and the attempt to do so was accompanied with much laryngeal stridor.

23rd.—Wound redressed and drainage-tube removed; discharge merely serous and very slight. Tracheotomy tube also removed and respiration performed comfortably without it. Both wounds healed satisfactorily and quickly and the child was discharged quite well on Aug. 5th.

Remarks by Mr. CARLESS.—The treatment of retro-pharyngeal abscesses seems to be still in a somewhat unsatisfactory state, for even in text-books published in 1891 and supposed to be up to date elaborate instructions are given for dealing with them through the mouth, and scarcely any mention is made of the above plan of treatment. Speaking generally, abscesses placed behind the pharynx are divided into two clinical groups—the acute, arising from a traumatic cellulitis started by a penetrating wound of the pharyngeal wall, say, by a fishbone or from a sympathetic lymphadenitis, the retro-pharyngeal glands suppurating as a result of intra-nasal mischief, or idiopathically, the most common form in children and possibly due to suppuration within one of the pharyngeal follicles extending backwards; such abscesses are almost always treated by incision through the mouth. The second, or chronic retro-pharyngeal abscesses, are tuberculous and secondary to caries of the cervical spine. The majority of surgeons concur that the plan of treatment devised by Professor Chiene of Edinburgh should be adopted in these cases, and as to the wisdom of this course there can be no doubt; for to open such an abscess into a septic cavity like the pharynx is to expose patients to all the risks of chronic septic poisoning from which antiseptic surgery has claimed to deliver them. The above case is reported in detail in order to emphasise the fact that the same plan of treatment should be adopted, even in acute cases, where no spinal disease is present. The advantages claimed for it are: 1. That the patient runs no risk from the entrance of pus, often fetid, into the air passages. For even if the incision be made with the head hanging backwards over the end of a table, as recommended by some German surgeons, the first deep breath which follows the removal of the swelling which has caused the dyspnœa is likely to be accompained by the entrance of more or less of the pus, and this may lead to all sorts of subsequent pulmonary trouble. 2. That the duration of the case will be much shorter and the after treatment much simpler. The external wound is readily kept aseptic, and thus when once the pus has been evacuated nothing but serum will subsequently escape, necessitating a drainage-tube to be inserted for a few days only. If the opening be made through the mouth suppuration continues until the cavity is completely closed, rendering needful the daily passage of a probe, sound or syringe to keep the pharyngeal wound from closing and thus prevent reaccumulation; and such is by no means easy in children. Moreover, the pus formed will be discharged into the pharynx and swallowed, and the general health thus further impaired. The operation itself is by no means difficult if care be taken to follow the guides given—viz., (*a*) the posterior border of the sterno-mastoid; and (*b*) the transverse processes of the vertebræ. The main vessels and nerves of the neck will not be seen and are in no danger, as the necessary manipulations can be performed well behind them. It may be objected that tracheotomy is rather a severe additional measure to adopt for the relief of the dyspnœa, but it must be remembered that this is due not merely to the mechanical obstruction caused by the abscess, but also to the œdematous condition of the glottis associated therewith, and which does not always disappear immediately. In the above case respiration was not satisfactorily re-established without the tube for four days, and marked laryngeal stridor was present on any attempt to do without it during that period. I cannot but think that an aseptic high tracheotomy and an aseptic evacuation of the pus through the neck is much preferable to plunging a bistoury or pharyngotome through the pharyngeal wall, and that the convalescence will be shorter and more satisfactory.

NORTH RIDING INFIRMARY, MIDDLESBROUGH.

A CASE OF URINARY CALCULUS, THE NUCLEUS BEING FORMED OF A LEAD PENCIL GUARD; LATERAL LITHOTOMY; RECOVERY.

(Under the care of Dr. WILLIAMS.)

WE give below an account of a calculus removed by the lateral cutting operation from the bladder of an adult male. The nucleus is of unusual character, and although many and very different substances have been introduced into the bladder, we are not acquainted with a nucleus quite of this description. The deposit upon this foreign body is deserving of attention; the usual deposit consists of the phosphate of lime and phosphate of magnesia and ammonia. In this case there were "a layer of uric acid, then fine alternating layers of uric acid and phosphates and then a thick layer of phosphates." In the museum of the Royal College of Surgeons of England there is a specimen amongst the calculi described in the catalogue: "A slender piece of steel as the nucleus of a large oval calculus, consisting almost entirely of uric acid. The tendency to the deposit of uric acid must have been very strong in this individual, since it has not only prevented the deposition of phosphates, but has established and maintained during the whole of the period required for the growth of the calculus a diathesis of a totally different character." The patient under the care of Dr. Williams must have had this tendency very strongly marked.[1] For the notes of the case we are indebted to Mr. G. Victor Miller, resident surgeon.

T. W——, aged thirty-six, of no occupation (being a man of weak intellect), was admitted into the North Riding Infirmary on April 6th, 1892, complaining of frequency of micturition, together with great straining and pain in the supra-pubic region and in the urethra when passing urine. He stated that he passed his urine every twenty or thirty minutes, and that the bowel came down during the act. This condition had been going on for two months. As there was evidently obstruction to the proper outflow of urine a catheter was passed, which on entering the bladder was found to grate against something which proved to be a stone when a sound was introduced. The stone lay towards the pubes just to the left of the urethra and appeared to be fixed, for each time an instrument was introduced (and this was pretty frequent, either for washing out the bladder or for examination) it always came in contact with the stone lying in the same position. On informing the patient's mother that he was suffering from stone, she said that he had been brought to this infirmary three years ago to have a hairpin which he had inserted removed from his urethra, and possibly he may have passed something up again. He was questioned, and it was ascertained that he had, two years ago, passed up a piece of tin about a quarter of an inch wide and an inch long; he said it had remained up and did not trouble him in any way. The urine on admission was alkaline and after standing deposited a dense layer of phosphates and pus. The capacity of the bladder, as was ascertained on washing it out, was greatly diminished—a condition due, of course, to inflammatory changes caused by the presence of a foreign body. The diagnosis was stone in the bladder, with probably a foreign body as a nucleus.

Having received permission to operate, it was decided to perform lateral lithotomy. Lithotrity was considered inadvisable owing to the probable presence of a foreign body. The operation was performed on April 26th. No difficulty was experienced in effecting an entrance into the bladder, but trouble began on introducing the forceps. Examination with the finger showed the stone to be fixed towards the pubes in a sort of pouch of the bladder wall. The long axis of the stone was lying transversely, rendering it difficult to seize

[1] See also THE LANCET, vol. i. 1889, p. 1213.

it with the forceps. At the first few attempts to grasp the stone the outer layers of it, consisting of phosphates, came away. Finally, after a series of attempts, the whole was removed by the finger and scoop aided by supra-pubic pressure. After this the pouch was cleared of a quantity of phosphatic débris and the bladder freely washed with boric lotion. The stone, without including the shell first broken off, was almond-shaped, being an inch and a quarter long, three-quarters of an inch wide, and half an inch thick. One side of it having been scraped away with a penknife, there was disclosed lying along its centre a brass guard for a lead pencil. Round the foreign body was a layer of uric acid, then fine alternating layers of uric acid and phosphates, and outside these a thick layer of phosphates. The specimen may be said to be unique. The whole stone, including the layers that were broken off, would be about the size of a large walnut. The patient made good progress until May 5th, nine days after the operation, when his temperature suddenly rose to 105° F.; he complained of headache and a feeling of sickness; his tongue was very foul and he had several slight rigors. This condition was combated by antifebrin, free washing out of the bladder with weak boric lotion and by purgation. Next morning the temperature had fallen to 99°, and from this time his progress may be said to have been uninterrupted. Simultaneously with the closing up of the wound the patient began to retain his urine for an hour or two, and as the condition of the bladder improved so did its capacity become greater and the urine could be retained for several hours. The patient's general condition improved. His appetite increased and he gained in weight. He left the hospital perfectly recovered on June 17th.

DEVON AND EXETER HOSPITAL.

COMPOUND DEPRESSED FRACTURE OF SKULL; LACERATION OF BRAIN; OPERATION; RECOVERY.

(Under the care of Mr. BELL.)

THIS is another interesting contribution to the surgery of the brain, and is the more interesting from the fact that several hours elapsed between the injury and its treatment. The brain was extensively damaged in the motor area on the left side and the symptoms indicative of injury in that region chiefly showed themselves during the time when œdema of the brain might be expected. We published last year[1] notes of a case in which after a fall a boy four years old developed symptoms on the same side as the injury, and recovered after the depressed fragments had been elevated. We also published in July of that year two interesting cases operated on by Mr. Hulke for compound depressed and comminuted fractures. We are indebted for the notes of the case to Mr. H. Andrew, house surgeon.

A. P——, aged twenty-four, was admitted on April 15th, 1892. On admission he was able to walk in, was a well-made youth, rather pale, but quite conscious. He had a slight fault in his speech, and was at a loss for words now and then—a condition which had only come on since the accident. He complained that while driving a young horse on the previous day, he being seated on the shafts of the cart (left side), he was thrown off and fell into a ditch, where he was picked up shortly afterwards unconscious, in which state he remained for three hours. A medical man was called in, who said his skull was fractured. He advised the friends to bring him to the hospital, which they did the next day, a distance of ten miles. Previously to the accident he had had a little drink, but was sure he was not drunk.

On examination, just below the left parietal eminence was a small contused wound about an inch in length, something like an inverted T; the probe passed in for more than an inch, but nothing was detected, so it was withdrawn and tilted, when a rough edge of bone was felt. There was marked pulsation around the wound; pupils equal; no paralysis to be made out; heart and temperature normal. Shortly after admission chloroform was administered and Mr. Bell prolonged the posterior limb of the wound, and on reflecting the flaps found that several large fragments of bone were buried in the brain. He trephined over the parietal eminence and removed six large pieces. They were placed so as to form a cone rather over an inch in depth. A considerable portion of cerebral matter escaped during the operation, and while the fragments were being removed there was marked twitching of the muscles of the right side of the face and the right hand. The wound was thoroughly irrigated and sewn up, a space being left for drainage.

April 20th.—During the night the patient complained of numbness of the right hand and arm, as also of increased inability of expressing himself. At 12 (noon) there were slight convulsive movements of the right side of the face and arm, with loss of consciousness for about two minutes. At 11.30 P.M. there were very marked convulsive movements of the right side, face, arm and leg, and he bit his tongue. A dose of bromide of potassium was ordered every four hours.

21st.—Paralysis of the lower half of the right side of the face, with marked weakness of the right arm.

From this time he rapidly improved, and when last seen on July 18th there was complete recovery from the paralysis and but slight difficulty of speech. He feels well and clearly remembers events in connexion with the accident.

The temperature rose after the operation to 100°, and for the next ten days ranged from 98·6° to 99·8°; it then became slightly subnormal. The pulse during the first four days ranged between 70 and 80; the next week it gradually fell to 40, and remained thereabouts for a fortnight. The respiration continued throughout the first weeks at from 24 to 20.

[1] THE LANCET, Oct. 10th.

Reviews and Notices of Books.

Practical Pathology: a Manual for Students and Practitioners. By G. SIMS WOODHEAD, M.D., F.R.C.P. Edin. Third Edition. Edinburgh and London: Young J. Pentland. 1892.

THERE is no better index of the progress of science than that which is afforded by the successive editions of a standard text-book. The author of such a work, if he wishes his book to maintain its popularity, is compelled to keep pace with advancing knowledge and must perforce enlarge the limits of his manual. To do this well requires much skill and judgment as well as an intimate acquaintance with the growing literature of his subject and a practical familiarity with modern methods. Those who remember the advent of Dr. Woodhead's manual nine years ago and the freshness with which the details of morbid histology were described and illustrated will find in the latest edition a considerable amplification and revision of the text, as well as many new coloured engravings which form a notable feature of the book. Thus the work has much increased in bulk without losing any of its characteristic points. In the first place the author has made many additions to the technical part dealing with methods of preparation of histological specimens, showing how well he has kept abreast of the times. In the chapter on Inflammation and Repair we find much that is new, and the share taken by the connective-tissue elements in the latter process is clearly enforced; whilst naturally the doctrine of phagocytosis receives prominent notice. As regards the organs, which are dealt with in turn, the descriptions of their morbid lesions are preceded by a brief exposition of normal structure; we may notice a particularly full account of acute interstitial hepatitis, as occurring in the course of scarlet fever; an able comparison of the histological features of common cirrhosis and biliary cirrhosis; the process of fatty degeneration of the heart wall in pernicious anæmia and that of the kidney in diabetes; whilst the student can have no safer guide in the interpretation of phthisical lesions than is given in the pages devoted to tuberculosis of the lung, caseous broncho-pneumonia and phthisis. The sections upon the bones and joints and that on the nervous system have also received considerable additions. In a word, the book cannot fail to be of the greatest service to the worker in the pathological laboratory and Dr. Woodhead may be congratulated upon the success with which he has managed to render it one of the most useful and practical manuals of its kind.

The Scottish Poor-laws: their History, Policy and Operation. By ROBERT PEEL LAMOND, Member of the Faculty of Procurators in Glasgow. Hodge and Co.

How best to ameliorate the condition of the poor is of all problems now pressing for solution at the hands of statesmen the one which gives rise to the greatest perplexity and the most diverse suggestions. The conditions of the problem are not materially different in Scotland from what they are in England, and for this reason Mr. Lamond's treatise on the Scottish Poor-laws, while of special interest to the public north of the Tweed, is as far as possible from having only such special interest.

The book is a new edition, revised, enlarged and in great part rewritten, of a work first published anonymously rather more than twenty years ago. It is safe to predict for it in its present form an important influence in guiding to practical issues the discussion, now become so widespread and keen, of the grave economic questions with which it deals. The author's training and experience as a solicitor, and especially his familiarity for many years with the affairs of the great Barony Parish of Glasgow, put him in a position of advantage at the outset, which a judicial habit of mind enables him to preserve throughout, with reference to the mass of facts and figures calling out at every turn for consideration and comment. Broad in his sympathies when projects of reform are in question, he yet never loses grip of what is practical.

The system of poor relief established in Scotland has from time to time been variously attacked, though of recent years hostile criticism has for the most part been directed against the administration of the law rather than against the policy or the essential features of the law. Radical objection is even now, indeed, frequently urged on the ground that the poor are worse off than they were before the legal assessment for their support came, in nearly every parish, to supersede the voluntary contribution which used in general to be relied on; and also on the ground that the effect of the change in the mode of providing for the poor has been greatly to increase the number of paupers in the course of the last forty or fifty years. Mr. Lamond faces these and similar charges against the present system with an obvious resolve to ascertain what truth, if any, underlies them, and, as the result of a full and careful investigation of the evidence, shows them to be devoid of any solid foundation in fact. In particular, as regards the statistics of pauperism, he proves that there has been no real increase since 1849, that within the last twenty years there has been a decrease relatively to the population of the country, and that within the same period there has been a decrease in the number of all classes of paupers except the lunatic class. Mr. Lamond's explanation of the exception leads him to censure the policy of the Board of Lunacy.

Having, on a survey of the whole matter in controversy, made out the existing law to be indubitably sound in principle, Mr. Lamond proceeds to examine in detail the causes of discontent which have been alleged against the administration of the law. The charge of extravagant expenditure he partly refutes and partly substantiates. As making for economy in directions where there is at present more or less waste of public money, he advocates reform in the constitution of the local managing bodies, the merging of the Board of Lunacy in the Board of Supervision, the simplifying of the law of settlement by recognising birth in such or such a parish as the sole ground of right to a settlement in that parish, and extension of the expedient of boarding out harmless lunatics as well as pauper children. With regard to the mode in which the poor rate is levied, Mr. Lamond argues conclusively against going back from assessment on rental to assessment according to means and substance, but acknowledges the existence of good grounds for complaint as to the incidence of the tax under present conditions, and submits proposals for ensuring more equable pressure and for obviating unfair escape.

Amongst other subjects discussed with the same sufficiency of information and the same clearness of insight may be mentioned the right of appeal against the refusal of relief, the maintenance of the able-bodied while they are out of work, the classification of the inmates of poorhouses, the liability of relatives, and the status of medical officers. On all these points Mr. Lamond's views, whether they command unqualified acceptance or not, are so ably set forth as to merit at least attention and respect. His protest against the precarious tenure on which medical officers hold their appointments carries with it our most cordial assent.

Schemes for old-age pensions engage a large amount of public interest at the present time, and the activity of Mr. Chamberlain in the matter has done much to bring a plan of national insurance within the sphere of practical politics. As is only natural and appropriate, Mr. Lamond devotes a considerable section of his work to the question. With the objects sought to be achieved by those proposals Mr. Lamond is avowedly in perfect sympathy; but the outcome of his argument—an argument founded on accumulated facts—is to trust for the realisation of the ends in view, to the potent instrumentality of the friendly societies and the trade unions, and to the beneficent operation of a somewhat amended poor law.

On the Necessary Precautions to be taken to obtain the most Benefit from the Climate of Nice and the Riviera. By THOMAS LINN, M.D. Nice. 1891.

THIS short work consists of a series of aphorisms, with some explanatory matter, upon the rules to be observed by the invalid who resorts to the Riviera. The invalid is advised to make a point of going in-doors before the sun sets and not to go out before it rises, to put on additional clothing when going from the sun into the shade, to carry a sun umbrella, to wear smoked eyeglasses, not to overdress or walk too fast, not to remove the outer coverings at once on entering the house, to have a room facing south, to attend to the sanitation and ventilation of his dwelling, to adapt his diet to the climate of the country, to remember that the dosage of his medicines may require some change, not to travel south too fast, not to defer coming south too late in the year, not to hurry away too early in the spring, and not to expect a complete cure in one season. Most of these rules are obvious, but will be useful to novices in climatic treatment. Dr. Linn recommends the climate of Nice in the following conditions: Chronic bronchitis, with copious secretion; phthisis of the "passive" kind; chronic inflammations of the larynx, nares &c.; general debility, accompanied by dyspepsia, anæmia or hypochondriasis; diabetes, dysmenorrhœa, paralysis, rheumatism, sciatica, gout. The only affections that he thinks are definitely unsuitable to the climate are various nervous affections which he does not particularly specify. He makes light of the differences between Nice and the other Rivieran resorts, holding "that it is not possible to believe that there can exist any wonderful difference of climate in these few miles of coast, except in certain local spots accidentally made by the protection of a hill or a clump of trees." We believe the differences between Nice and Mentone, and even between Cannes and Grasse will be found to be very real and worthy of careful consideration. Nice has many attractions, especially for the less serious class of invalids or for those who only fancy themselves ill, but it is windy and unduly exciting to many patients, and the climate is more treacherous than that of Hyères, Mentone, San Remo or Bordighera. Its attractions, are however, numerous and the accommodation, amusements, &c., leave little to be desired. Needless to say, there are many patients to whom the gay and brilliant life of Nice is the greatest of snares. It avoids, however, one of the chief drawbacks of many health resorts—viz., *ennui*.

A Thousand Cases of Pulmonary Tuberculosis, with Etiological and Therapeutic Considerations. By R. W. PHILIP, M.A., M.D., F.R.C.P.Edin. Edinburgh: Oliver and Boyd. 1892.

THE subject matter of this essay is almost wholly etiological, and it is of value because of the care taken to make the diagnosis sure. The majority of the thousand cases were examined for the presence of bacilli in the expectoration. All the ordinary etiological factors are considered in turn—occupation, sex (the proportion was 63·7 per cent. male to 36·3 per cent. female), and age—and there is an interesting chart showing that of 500 phthisical men the average height does not vary much from the standard among another equal group suffering from other affections. As regards heredity Dr. Philip found that a definite family history of tuberculosis could be traced in 23·3 per cent., a smaller proportion than is generally supposed, but in near accord with the statistics of Flint and Pollock. Although this may be the proportion of cases of direct inheritance there is, as the author points out, an even larger class who have inherited from different causes a weakened power of resistance. He found a definite evidence of contagion in 6·7 per cent., and cites examples thereof. The influence of overcrowding is well shown in the map of Edinburgh, in which are indicated the localities from which these patients came, and the bearings of this on the possible spread of the disease by infection are pointed out, although the other elements of insanitation which may favour the development of phthisis in these districts must not be overlooked. The series is further analysed with respect to the relative preponderance of bronchitis, pleurisy, fevers, measles, influenza (about 4·4 per cent.) as antecedents. There is also an analysis of complications and other conditions surrounding the disease, and the whole forms an important contribution to science.

Descriptive Catalogue of the Pathological Museum of St. Mary's Hospital. By J. JACKSON CLARKE, M.B. Lond., F.R.C.S. Eng., Curator of the Museum and Pathologist. London. 1891

IT is matter of congratulation that there is now hardly a pathological museum in the metropolis that has not its published catalogue; and since most of these volumes are drawn up on the same lines, those engaged in collecting material for the study of a special pathological subject will find their labours very materially lightened by reason of these publications. The existence of these valuable collections in connexion with every general hospital speaks forcibly in proof of the industry and activity with which the pursuit of pathological anatomy is being carried on; but as there is also a school to every hospital, the aim of the curators must be to provide a complete collection of specimens of the ordinary lesions as well as of those that are valuable for their rarity. The catalogue before us shows that in both these respects the Museum of St. Mary's Hospital is well stocked, and the catalogue is drawn up with excellent judgment and fidelity of description.

Ueber das Stottern. Von Dr. J. A. SSCKORSKI, Ins Deutsche überhaagen unter den Redaction von Dr. V. Hinze. Berlin: August Hirschwald. 1891.

THIS book furnishes a thorough and scientific account of a subject which is too much neglected by the medical profession. The author places stammering among the neuroses, and believes that, while it is manifested in spasm of parts of the articulatory and respiratory apparatus, it ultimately depends upon an abnormal condition of the speech region of the cortex. His observations have been extensive and in many cases show an interesting connexion between this neurosis and other physical and psychical defects, and in the section on Etiology he shows that women enjoy a comparative immunity from this condition as well as from left-handedness and a peculiar defect of writing which he has observed, and which is described in this book. These facts, he thinks, indicate a greater stability of the left hemisphere in women.

In the section on Treatment attention is directed chiefly to the various vocal and articulatory exercises which are used to overcome the condition; but the general measures adapted to the treatment of a neurosis are not lost sight of.

Colotomy, Inguinal, Lumbar and Transverse, for Cancer or Stricture, with Ulceration of the Large Intestine. By HERBERT W. ALLINGHAM, F.R.C.S., Surgeon to the Great Northern Hospital; Assistant Surgeon to St. Mark's Hospital; Surgical Registrar to St. George's Hospital. London: Baillière, Tindall and Cox. 1892.

THE profession is well acquainted with the very active share Mr. Herbert Allingham has taken in reintroducing and improving the operation of anterior colotomy. The little book before us is stated to be the result of his experience in the different forms of this operation. The style is somewhat egotistical, "I" and "my" recurring with frequency.

Tito Vanzetti: Cenni Necrologici. Padova: Stabilimento Prosperini. 1892.

THIS handsome octavo is a tribute to the memory of the brilliant operator and teacher who for many years held the chair of Clinical Surgery in the University of Padua. It is prefaced by the following dedication: "These writings, inspired by feelings of regret and admiration for Tito Vanzetti, are dedicated to his grandchildren by his widow and daughter, who on the third anniversary of his death have religiously gathered them together as a future incentive to virtue and to study." The writings in question are in many languages, being testimonies to Vanzetti's noble career from professional journals and from scientific reports in nearly all the countries in Europe—testimonies in which Great Britain is represented by THE LANCET alone. Unlike the majority of his compatriots the great Venetian surgeon qualified for his life work in many Continental schools. After graduating at his *alma mater* in Padua he studied under the celebrated Wattmann at Vienna and then proceeded to Russia, where he followed with close attention the surgical practice of the army medical staff. So high did he stand in Russian esteem that after duly graduating in the University of Kharkoff he was elected in that school to the chair of Clinical Surgery and Ophthalmology, in which capacity he wrote in 1844 and 1846 two memorable works embodying his clinical experience, one in French, the other in Latin, in both of which languages he was an acknowledged master. His observations on preputial calculi and on the treatment of aneurysms by compression of the artery above the tumour were admired at the time for their originality and practical suggestiveness. The latter operation, claimed by Italians for their countryman Guattani, he greatly improved upon, and in a visit to Ireland in 1844 he introduced his special modifications of it to the profession in Dublin. A few years afterwards he returned to Padua, where he held the post of Lecturer on Clinical Surgery till his death. He was in frequent communication for many years, by personal visits or by correspondence, with the leading surgeons of most of the European schools, and the list of honours—fellowships of learned bodies among the number—that were bestowed on him in nearly every Continental capital occupies a considerable part of the present volume. By none of these schools, however, was he held in greater esteem than by those of London, Manchester, and Dublin, thus contributing muc to the diffusion of his fame. How far he was, especially on the continent, in advance of his time may be inferred from the fact that in 1846 he was the first to perform ovariotomy in Russia and in 1859 the first to operate successfully for the same disease in Italy. The Signora Vanzetti did well to compile this record of her husband's achievements, of which the above instances are given only to supplement those reproduced from THE LANCET of Jan. 21st, 1888, when we published the obituary notice which now reappears with the official biography of Tito Vanzetti in the beautifully printed volume before us.

THE LANCET.

LONDON: SATURDAY, AUGUST 27, 1892.

THE advent of a new Government to power and the appointment of an eminent physician and sanitarian as Secretary of the Local Government Board concurrently with the clearly expressed opinions of public associations induce us, after a considerable lapse of time, to advocate once more in our columns the formation of a Public Health Department of the State. The need of such a department has, indeed, been frequently insisted on by us (*vide* more particularly THE LANCET of Jan. 18th, 1879, and of Jan. 31st, 1880). Briefly, we pointed out in these articles that the care of the public health should form an integral part of State policy; that there should be centralisation of health organisation and administration, and that the narrow interests of localities should be merged in the broad exigencies of national health. We also showed how the Medical Department of the Privy Council, of which the activity is but the shadow of former times, had retrograded since its amalgamation with the Poor-law Board and had become involved in the meshes of official "pauperism," and we endeavoured to draw a distinction between State and parochial medicine. What we wrote then holds good and with greater force now. Notwithstanding the splendid work of the Medical Department of the Local Government Board under the brilliant guidance of Sir GEORGE BUCHANAN and Dr. THORNE THORNE this department is but an incomplete specimen of what a public health bureau should be. Its alliance with and incorporation into the old Poor-law framework deprive it of active initiative, and account for the almost heart-breaking delays which occur at important crises in the life-history of public hygiene. The placid routine of pauper administration is not easily disturbed to make way for broad and energetic measures of State policy. Nor is it always possible for the same presiding genius to regulate with equal ease and efficiency the interior economy of a workhouse and to cope with an invasion of cholera or small-pox. Truth to say, this unnatural union of Poor-law and public health is in urgent need of being dissolved, and the sooner the better for the larger interests of the kingdom. Thus divorced the present medical department would form an admirable nucleus of a State office in intimate relation with the local health administration of the country. An analogous process has taken place in the formation of a Board of Agriculture from the Agricultural Department of the Privy Council. Granting the movement of decentralisation, as evinced in the establishment of County Councils and possibly of District Councils, the advantage of Imperial control will generally be acknowledged. And this control would be better and more efficiently exercised by a board in direct and sole *rapport* with the subordinate bodies than by the present Local Government Board, which, as we have shown, is still largely tinctured by Poor-law methods. The formation of such a controlling authority would tend to greater unity of administration, so much to be desired in London, and to more regular and systematic inquiry into the sanitary condition of the kingdom generally, which at present is incomplete, spasmodic and ruled by panic. As regards the Minister who is to preside over such a department, he must of necessity, owing to our system of party government, be a politician; and ought, from the importance of his office, to belong to the Cabinet. But the question whether he should be a member of the medical profession or not, as well as other matters relating to the most desirable constitution and arrangement of offices in the event of the formation of a Public Health Department, we must leave for discussion on a future occasion.

A CONTEMPORARY recently suggested that all persons proposing to climb the Matterhorn or other difficult peak should be treated as dangerous lunatics and forcibly restrained. The implication is that mountain climbing is a foolish and useless practice which ought to be discouraged by every means in our power. To this view we can by no means give our adhesion. That the practice in question has considerable dangers, that it needs to be exercised under proper rule and guidance, that for many individuals it is undesirable and even hurtful, all this we admit; but we also hold that there is a large class for whom mountain climbing is what it has so often been described by its enthusiastic patrons—viz., one of the most healthful and exhilarating forms of out-door exercise. We propose to consider for what classes of persons it is suitable and some of the rules by which it should be regulated.

As negative rules are usually easier to formulate than positive, we may begin by specifying some classes for whom mountain climbing is ill adapted. First, there is the senile, and by them we mean not only the senile in years, but the senile in vessels and tissues. The elderly man who has been a practised mountaineer for many years may continue the pursuit not only, as a rule, without danger, but with great advantage. On the other hand, there are few men turned fifty who are sufficiently sound in wind and limb, sufficiently free from degeneration of heart and bloodvessels, to begin a practice involving so much strain as does mountaineering—at least in its more ambitious forms. Many of the most deplorable accidents annually reported from the Alps are cases of elderly men, sedentary livers during the greater part of the year, and with consequent flabby heart and muscles, who hurry off to Zermatt or Pontresina, and at once proceed to attempt feats which should be reserved for the mountaineering adept. The result in not a few cases is acute dilatation of the heart or rupture of a bloodvessel, and either sudden death or life-long enfeeblement. Persons such as we have described should, as a rule, eschew mountain climbing altogether and take to some out-door pleasure involving less strain, such, for example, as yachting or golf; but if they are ambitious to become mountaineers they should first consult their physician and obtain an assurance that they are free from serious organic defect, and then they should begin with modest feats and only essay the more difficult ascents when they have proved the adequacy of their powers to those that are easier.

Apart om senile change, heart disease in any form must be regarded as an effectual bar to mountaineering. We do

not underrate the great importance of regular and graduated exercise to patients suffering from cardiac disease, but they must carefully shun any steep or difficult ascent. The same rule must apply to most cases of serious affections of the lungs. No doubt the patient with quite incipient phthisis or with chronic pleurisy or an imperfectly resolved pneumonia may most advantageously undertake moderate climbing excursions in a mountainous country, but the more difficult tasks are not for them. Highly neurotic persons do not make good climbers, partly because the keen mountain air unduly excites their nervous systems, and partly because their self-command may fail at some critical point. But the commonest error, as we have already hinted, is for persons who are quite out of training to rush off to the Alps and begin without any adequate preliminary preparation tasks that try to the utmost the powers of the professional guide or the trained mountaineer. *Festina lente* is a good rule in most of the concerns of life; it is absolutely indispensable in mountaineering.

Let us now consider a few of the rules which should regulate mountain climbing in the case of those who are not in any way incapacitated for it. The climber should start early with the double object of economising time and of getting away from the hot valleys before the sun's heat has attained its maximum. Experience seems in favour of taking only a light breakfast, say of rolls, coffee and eggs, before setting out. The question of dress is very important. The mistake is often made of starting for one of the higher peaks in very light garb. The climber feels very comfortable for the first few hours, but when he gets among the snows, when, perhaps, keen winds from the neighbouring glaciers begin to blow, he longs for the thickest of tweeds and the warmest of underclothing. A stout tweed cap, with lappets for the ears, warm gloves, and thick nailed boots are indispensable for any prolonged tramp among glaciers or snow-fields. A cardinal rule is to begin the ascent slowly and never to excite dyspnœa by undue rapidity of movement or over-exertion. If the climber begins thus he finds after an hour or two that his initial fatigue begins to vanish, he gets habituated to the pace, the keen and rare mountain air acts as an admirable tonic, and he can maintain his efforts for many hours without exhaustion. Foot soreness must be guarded against by those predisposed to this troublesome affection. Strong boots and good stockings do much to obviate it; soaping the stockings or sprinkling them with bismuth and oxide of zinc, and on the first appearance of signs of irritation the application of a weak whisky lotion, are the chief measures to be recommended.

The question of food and drink *en route* is an important one, regarding which each mountaineer is more or less a law unto himself. Many climbers seem to do best on very light nourishment—a sandwich, a piece of chocolate, and a glass of milk or small cup of black coffee—reserving the serious repast of the day for the evening; but there are others who seem to climb best with a fairly substantial midday luncheon and a moderate allowance of wine. There is no doubt that, controversy apart, the professional guide almost always drinks wine, and very frequently brandy besides. This is, however, not by any means a conclusive argument in favour of alcohol for the mountaineer.

We might enlarge much more fully on this interesting question, which is opportune at the present season, but for the present we must conclude. Mountaineering is too well established in favour, too thoroughly acknowledged as a source of one of the keenest and purest of pleasures, to be put down by a sneer or ruled out of favour because it has serious dangers or because there are many to whom it is necessarily forbidden. Most of the best things are the most open to abuse. This is true of mountaineering.

IN a thousand ways the alleviation of the lives of our labouring poor is becoming a question of imperial importance. The more favoured part of the community finds itself forced, even in self-defence, to turn its attention to the less favoured and more numerous part, to interest itself in the present and the future of the great army of workers and to do its best to minimise the hardness and relieve the gloom of their lot. To promote what WORDSWORTH, in a memorable passage, calls "the spirit's health," as a means of counteracting a debasing resort to mere sensual indulgence, is a form of this alleviating policy from which the best results may be anticipated. To rouse, stimulate and develop the love of the beautiful, in Nature first and then in Art, is a primary step towards this end—a step, moreover, with which the great working army aforesaid will readily fall in, till it can direct and accelerate its own advance onwards and upwards to fresher vistas and ampler horizons. It is really astonishing to contemplate the powers of appreciation of whatever is noble and refined which are latent in the lower orders of town and country, and it is humiliating to reflect how little the leisured and moneyed classes have done to give those powers the free scope and the opportunities which are all they ask. In the whole range of poetry there are few passages more touching than the stanza in ALEXANDER SMITH'S exquisite idyll entitled "Glasgow," in which the humble pattern-drawer, afterwards Secretary to the University of Edinburgh, depicts with the stroke of a master the ecstasy of the artistic soul struggling to follow the beckoning finger of Nature from among the dingy and dark surroundings of his early life:—

> "I dwelt within a gloomy court
> Wherein did sunbeam never sport
> But yet my heart was stirred,
> My very blood did dance and thrill
> One morn when on the window-sill
> Spring lighted like a bird!
> Poor flowers! I watched them pine for weeks
> With leaves as pale as human cheeks.

And yet, with all this full and ardent response to the invitation of the beautiful, the cold obstruction of labour unrelieved was interposed between him and his fruition:

> "Before me lies a road of toil
> With my grave cut across."

Of how many millions may not this bitter truth be said; Of how many thousands of the more favoured class may it not be added that, possessing all and more than all the advantages denied to those poorer ones, they have done nothing to give them even a glimpse of the beautiful in which they bask?

A beginning has been made and has, indeed, for some time been in progress towards wiping out this stain on the record of the upper classes. Mr. CHARLES JENNER—to whose co5peration in the movement for evoking a love of flowers in

childhood and for making that love, as expressed in floral culture and arrangement, contribute by annual exhibitions to the support of children's hospitals we lately alluded—is at the head of a yet greater enterprise, that of the Working Men's Flower Show with Help from Wife and Child. He encourages the artisan and labouring citizen to devote such leisure as they can command to the study, the culture and the tending of flowers, carried on in "window gardens" with what sunlight is vouchsafed to them. The response to this truly enlightened and philanthropic suggestion surpassed even its author's anticipations, and in the last exhibition of the products of these amateur gardeners in the Edinburgh Corn Exchange he had the most gratifying proof that the seed of self-education and self-refinement he had sown had fallen on congenial soil. Himself a recognised authority on cryptogamic botany, he says in an eloquent letter to the *Scotsman* how much he had to admire in "the long tables of our most beautiful and rare native ferns, plants in perfect health and condition, cultured in the central purlieus of our Old Town and in suburban districts." He also drew attention to such "conifers of perfect symmetry and exquisite beauty as the Araucaria excelsa" and to "the many young palms and heaths" also on view at the exhibition. "The collection of cryptogamic plants, as a whole," he adds, "was most commendable, and proved that our laborious working men, their wives and children, had the most refined sense of correct, pure and elegant form independent of colour." One instance he dwelt upon with justifiable satisfaction. "A fine clump of Asplenium septentrionale won my close attention. Ten years of continuous patient care of a tiny bit of root from a cranny on the precipitous heights of Salisbury Crags has won from Nature this noble reward of honour to the adventurous climber. Such nobility of spirit, combining courage and perseverance with the gentle art of fern culture, deserves higher recognition than this poor praise of mine."

The Working Men's Flower Show with Help from Wife and Child in the Edinburgh Corn Exchange was memorable not only for what it placed on view, but for the social horizon it opened up. From the lowly pot of mint grown at the one window of a garret to the "begonia five inches high, with two blossoms of glorious splendour, that might have graced the window of a palace," the encouragement to the poor denizens of such squalid quarters as the West Bow and the Cowgate is such as to stimulate their growers to efforts ever higher, till the whole life of the artisan in "populous city pent" becomes brightened, sweetened and elevated. Well may Mr. JENNER ask the higher classes if they ought not to "encourage this dawn of refinement among toiling men, women and children." Their presence at such shows, even more than their open-handed liberality—though this, too, should not be wanting,—cannot fail effectively to promote and strengthen this most philanthropic, most salutary movement. The future lies with the democracy. Is it not in the best, aye, even the most material, interests of the leisured and moneyed classes that they should by every means encourage the growth of a chastened and enlightened spirit in that democracy and so ameliorate the lives of its individual members as to humanise it, ennoble it, make it aggressive only against the uncivilised and the retrograde? Nature herself points out the means by which the savage element in man may be mollified and refined. Exhibitions like that recent one in Edinburgh are full of symbolism possessing a moral and a social significance. Even as the poet's "gloomy court," unvisited by the sunbeam, ungladdened by the solar warmth, may yet be brightened and illumined by fresh leaves and flowers themselves, so the "spirit's health" of its inmates may be quickened and strengthened, touched to finer issues and turned to a nobler account than was possible under the traditional system of social exclusiveness and neglect. A more educated, more healthily evolved labouring class forms the substratum of a more normally developed, of a robuster, more masculine community; vice is combated at its most prolific source, and its inevitable progeny of pauperism and disease declines for lack of appropriate nutriment. Time-worn truths these, no doubt; but requiring constant restatement in response to still more constant indifference to them, until, with the spread of such movements as that of the Working Men's Flower Show, their relevance becomes less and less appreciable as the conditions which justify them tend to disappear.

IN our last issue we published the Report of our Special Commission on Sanitation in relation to the Law and Practice of House-letting. This report makes evident an important fact: that the principal house agents are fully alive to the need of some better system than now exists, by which persons taking houses can be protected against injury from faulty drainage. The fact has to be reckoned with that only in comparatively recent years has the importance of house drainage come to be understood, and only during this time have local sanitary authorities been in a position to require house drains to be properly constructed. Hence the majority of houses have been erected under conditions which have allowed the builders to neglect to make drains air-tight or water-tight or to provide any means for aerially disconnecting the house drain from the sewer or cesspool or for its sufficient ventilation. As a result, in many cases the drainage of existing houses has to be reconstructed and this often at great expense. The cost of the reconstruction of drains of houses which are let on lease falls on the leaseholder, who often has not many years' interest in the house. In the case of houses let on a three years' agreement or annual tenancy the cost properly falls on the owner of the house.

But the question arises as to who should be responsible for ascertaining that the drainage is reasonably perfect. In the letting of a furnished house there is an implied guarantee that the house is in a proper sanitary condition, and the Housing of the Working Classes Act extends the application of this principle to unfurnished houses or parts of houses of very small rental and occupied by working people. The unwholesomeness of the house, however, only comes to be considered when a court of law is satisfied that some injury to health has resulted from its condition. Nevertheless, the fact that the landlord is liable to an action for damages when this has occurred has had a useful effect in leading to the reconstruction of house drainage in many instances. In the letting of unfurnished houses above this small rental there is no implied guarantee and only the principle of *caveat emptor* obtains The intending house occupier

must take care of his own interests and must himself obtain such aid as is necessary to ascertain the condition of the house before he becomes a tenant.

The position of the sanitary authority deserves careful consideration. Obviously it is the duty of this authority to prepare by-laws which shall determine the principles upon which house drains shall be reconstructed and to make such inspections and examinations as will ensure that the work has been properly carried out. If this be honestly and carefully done in all cases in which houses are newly erected or in which house drains are reconstructed, in course of time the faults which exist in many houses will disappear, but the process must be slow; and again, however perfectly the work may be done, it will not last for all time, so that there can be no absolute certainty that drains which have been constructed under these conditions are always in the state which more recent opinion holds to be necessary. Some other system is therefore required; particularly to safeguard the individual who takes a house for a short period, or who merely wants lodgings, and who therefore ought not to have the burden thrown upon him of examining for himself the actual condition of underground drainage or the perfection of soil-pipes.

Our Commission has expressed the opinion that the system which is in force at Eastbourne is that which is the most convenient and which affords at the same time the greatest amount of security. In this town, and also, as we are now informed, in Folkestone, the sanitary authority keeps a register of houses which it has examined and found to be in a satisfactory state. There is no obligation on the house-owner to apply for his house to be entered on this list, but it is obvious that the fact that the sanitary authority is prepared to vouch for its condition is a distinct advantage to the owner if he desires to let any part of it, and is a considerable encouragement to him to incur the expense necessary to raise it to the required standard.

In an able leading article in *The Times* on the report of our Commission it is very properly pointed out that the desire to maintain the reputation of a fashionable watering-place like Eastbourne would not operate with sufficient force in districts in which the sanitary standard is pretty sure to be mischievously low. This is undoubtedly true, and we must anticipate that a number of years must still pass before the public sentiment is sufficiently aroused to bring about the changes which are necessary. But, as *The Times* shows, we may rely on the example of more advanced districts, and eventually it may be hoped that the demand for improved conditions will not be limited to those who are influenced by consideration for the reputation of their town.

In districts occupied by poor persons who are less keenly alive to the disadvantage of living in badly drained houses the responsibility thrown upon the sanitary authorities is obviously greater, for the reason that persons of this class are less able to protect their own interests. In these localities it is more incumbent upon the authority to ascertain that the house drain does not constitute a condition dangerous to health, and there need be no fear of opposition to any authority which makes it the practice to examine and test drains in its district. No doubt in some districts the authority is too largely represented by those who are themselves the owners or builders of houses which are faulty in this respect; but there has been during recent years a definite advance of opinion on this subject which must eventually influence the constitution of boards appointed to safeguard the public health.

Our Commission has shown that the law contains very ample provisions empowering sanitary authorities to require that house drainage must in the future be properly constructed; but, as we have already stated, there are in existence many houses which are faulty, and no one proposing to take a house must rely on the official machinery unless, as in Eastbourne and Folkestone, some special system is adopted. But even in these towns it must be recollected that only a proportion of the total number of houses is affected by this system, and for the rest, as elsewhere, the tenant must depend upon his own investigation or that of those whom he employs. We believe a large amount of the difficulty which now occurs is due to the fact that the public is entirely ignorant of the position of the law and is too much disposed to believe that any house a person may happen to take is in proper sanitary condition. It would no doubt be impossible at the present time to impose by law upon everyone letting a house the responsibility of guaranteeing its sanitary condition; but we think there would be a definite gain if some steps were taken which would make it clear to everyone whether or not the lessee was entitled to expect that the house he was taking was in this state. This would impose no hardship on either party to the contract; it would simply require the fact to be stated in every agreement or lease that the lessor did or did not guarantee the sanitary condition of the house, and it is not probable that Parliament would raise any objection to so simple a requirement. It would remove all doubts from the mind of the tenant and it would direct attention to the condition of the house, whatever it might be; and it would then be for the proposed tenant to take any steps in his own interest which he considered to be necessary.

Annotations.

"Ne quid nimis."

IMMEDIATE CHOLERA PROSPECTS.

THE sudden and severe outbreak of cholera at Hamburg is an event of great importance in so far as this country is concerned. Happily it had been foreseen. Two weeks ago we announced that certain ports, such as London, Grimsby &c., had been visited by Dr. Theodore Thomson on behalf of the Local Government Board with special reference to the emigration of Russian Jews from Hamburg into this country, and this was speedily followed by an order prohibiting the admission of bedding, disused clothing &c. from a number of ports in the German Ocean and from the Baltic into this country. On the 23rd inst. the Hamburg authorities admitted that cholera was prevailing there, and news followed which went to show that the outbreak was of a very extensive and fatal type. The rapidity with which the disease has managed to travel by means of German railway lines carrying Russian emigrants to the North Sea has brought us face to face with an infection having the full force of the Eastern disease, and from this point of view the occurrence is more serious than if the infection had reached so near a point after longer travel and

by a more distant route. The journey between Hamburg and our ports is so short that we may find apparently healthy people landing on our shores only to sicken after arrival. This is, in fact, what has already happened at Grangemouth, in Scotland, the patient arriving one evening and only falling ill in the early hours of the following morning. But this is what English sanitary authorities have all along been told it was their duty to face and to be prepared for. The circumstances, too, are in most respects like those which we had to meet in 1884, when trains and boats passed uninterruptedly from Paris to London, notwithstanding the existence of hundreds of cases of cholera in the French capital. The present occasion is perhaps more serious by reason of the early stage in the epidemic at which the infection has reached Hamburg, and because there can be but little doubt that a similar danger has to be anticipated from actual cholera at Havre and probable cholera at Rouen. We have already referred to the action taken by the Local Government Board some weeks back. We are also in a position to say that Dr. Parsons, Dr. Barry, Mr. T. W. Thompson and Dr. Theodore Thomson have for some days past been in personal conference with those of our port authorities whose districts are most likely to be affected by cholera at Hamburg and at Havre, and that a number of other measures are in contemplation should the disease extend to this country. But, after all, a central government can do but little in such an emergency to remove the causes by which cholera spreads in our sanitary districts. The main action must, in the end, be taken by our sanitary authorities, who have local knowledge as to their own needs and have ample powers enabling them to deal with defects calling for immediate action. The existence of cholera at Hamburg, and even the importation of a few cases into this country, by no means implies an epidemic; but at the same time we would repeat our recent warning as to the serious responsibility which devolves on sanitary authorities who fail to deal with such obvious conditions of disease as water-supplies liable to pollution, faulty sewers emitting foul emanations, methods of excrement disposal such as the midden privy, by which accumulations of filth are deliberately collected close to dwellings, and the like. In one way or another the warning has often been given, and it has been coupled with the knowledge, to which but few Englishmen can be strangers, that action which succeeds in freeing the water we drink and the air we breathe from the risk of contamination by excreta, is action which gets rid of the principal channel by which cholera can travel, and which in consequence places the populations benefiting from such circumstances in a condition which enables them to view cholera with comparative impunity.

THE CLOSING OF HOSPITALS.

SEVERAL complaints of the closing of the London Hospitals during the present period of the year have reached us, and that the idea of injustice or of lack of consideration is not confined to London is evidenced by a long communication in an Edinburgh paper in which similar complaint is made of the closure of several of the Edinburgh dispensaries. The question which it is attempted to raise is a somewhat serious one—viz., Are these institutions carried on for the benefit of the sick poor or of the medical profession? The line of argument appears sufficiently clear, but it is by no means satisfactory. If, it is urged, the hospitals close entirely or in part during the ordinary time of vacation, and are restored to their full efficiency with the commencement of the winter session, the inference of their existence primarily for the good of the schools appears to be conclusive, and hard words can be meted out to the committees and authorities responsible for wanton disregard of the needs of the sick poor. Stated in this bald fashion the grave charge of blundering and want of foresight seems to be fully warranted; but, on the other hand, it must not be overlooked that hospitals, far more than ordinary habitations, need frequent thorough cleansing and repair, and that though undoubtedly serious inconvenience may be caused if a large number of hospitals are simultaneously closed, it is relatively rare for such simultaneous complete closure to be necessary in many hospitals. When any great structural alteration is essential—when, for example, drains have to be reconstructed—the responsibility attaching to any temporising or half measures would be enormous, and it seems to be a mere fortunate accident that the work should be decided upon at a time when in the ordinary course of events the applicants for relief are fewest in number. It must not be forgotten that large numbers of the poor migrate for various reasons at this time of the year. Harvesting, hop-picking, friends in the country, all tend not only to actually reduce the number of the poor in London at this season, but also to send them back so far benefited by the change that need for hospital relief is less imperative. Even in the hospitals which remain fully open during vacation experience does not point to any special strain upon their resources owing to insufficiency of accommodation for urgent cases. From inquiries which we have made we learn that Charing-cross Hospital has been entirely closed since July 17th on account of drainage works, and that it will be reopened on Sept. 5th. It was originally intended that the Middlesex Hospital should be entirely closed for two months to enable extensive alterations and repairs to be effected to bathrooms, floors &c., but on its becoming known that two other large general hospitals in the neighbourhood were also closing at the same time the authorities made arrangements for keeping open about 170 beds. At the Royal Free Hospital and at King's College Hospital the beds in use have been reduced in number for the annual cleaning, whitewashing &c., but the time of closing has been curtailed as much as possible, and only such repairs as were imperatively necessary have been executed. In both of these hospitals the out-patient departments have also been closed for cleaning for a short period; but arrangements were made for attending to all urgent casualty cases and to all special out-patient cases, so as to avoid any neglect where immediate treatment or change of treatment was necessary. Similar statements have been received from St. George's Hospital, St. Bartholomew's Hospital, and the Westminster Hospital, while so far as we have been able to ascertain the only other hospital, in addition to Charing-cross, which is completely closed is University College Hospital, and we are informed that the serious amount of repairs required rendered this course an absolute necessity. Our inquiries have fully satisfied us that every reasonable precaution has been taken by the authorities of the different hospitals to minimise the inconvenience inseparable from alteration of routine and to ensure the sanitary surroundings by necessary repairs. From time to time it unfortunately becomes expedient for nearly every hospital to be thoroughly closed, but it does not appear that in any case at the present time this closure has been effected without due consideration of the conditions in other hospitals.

THE DANGERS OF READY-MADE GARMENTS.

IN THE LANCET of Aug. 13th we took notice of the suspicion of uncleanness which we fear must, at all events under present conditions of trade, remain inseparably connected with our clothes, and especially with all bought underwear. So long as it is customary for clothiers to send out, practically at random, their material in the form of piecework, so long will it be impossible to guarantee either its wholesome or its cleanly condition. Neither can it be denied that the inconvenience and even danger implied in this practice

are much enhanced by the prevalent system of "sweating." While this continues anything like effective cleanliness is hardly to be looked for, and we have in that fact a substantial reason for the repression of this injurious form of forced labour. Were it abandoned the selection and supervision of suitable homes in which piecework might be carried on would at least be much easier than it is at present. The case of public laundries is at once different and similar. Thanks to the nature of the work there is less risk of impurity. We should nevertheless be pleased to see some form of inspection applied to these establishments. As to the needless, haphazard and thoroughly unbusiness-like practice of trying on underclothing forwarded on approval, the sooner this is discontinued the better. In existing circumstances every purchaser of ready-made clothing must understand that he has really no protection against the activities either of contagious germs or of the more evident animalcules save the maxim, *caveat emptor*.

THE HEAT WAVE AND ITS CONSEQUENCES.

WHILST we have in this country been lately favoured with very enjoyable weather, it has been far otherwise for those living in the large cities of America, in Italy, in Spain, in the greater part of Germany and in large tracts of France. There the heat has been intense, the temperatures registered have been tropical and the suffering and loss of life among men and animals have been of quite an exceptional character. In New York and Chicago, in addition to cases of sunstroke and accounts of men and animals falling down unconscious or dying in the streets from the effects of heat, the infant mortality suddenly ran up, as it so often does under such circumstances, to an alarming figure. At Trieste we read of 110° F. being registered in the shade, while the temperature of the sea water was 90°. There seems to have been a remarkable heat wave passing over the Continent, and the depressing effects of direct solar heat have been much augmented by the presence of sirocco winds. We learn that there were 200 soldiers of the garrison of Tours in the hospitals, and that the time of the military manœuvres there coincided with that of the heat wave; that the temperature ranged from 117° to 127° in the sun, and that the amount of inefficiency from sunstroke and heat exhaustion among some of the troops who took part in those manœuvres was so large and its occurrence so sudden as to be little short of overwhelming. But there is no need to enumerate the various places abroad, concerning which somewhat similar details have appeared in the daily papers. Something of the same kind is a nearly annual recurrence. It is a question of degree, and this year the heat seems to have reached a much higher point than usual and to have been attended with a corresponding amount of sickness and mortality. The ill effects of heat on the body do not always give rise to the same phenomena or manifestations, but they are nevertheless the varied results of one and the same cause and pathologically are allied to one another. The mechanism by which they are brought about is through the nervous system; but the heat is not, in many cases, the only or even the dominating factor present. A man falls down pulseless, or nearly so, from heat exhaustion, as the result of exertion and fatigue in hot weather, with a pallid face and a cool, perspiring skin. If he is placed in the shade, exposed to a current of air in the recumbent posture, and given a stimulant, he soon recovers. An infant or child living in a city suffers from diarrhœa attended with notable prostration. The illness is mainly attributable to the depressing effect of heat and a vitiated atmosphere on the child's nervous system. The best thing is removal to the seaside or country; if children were sent away from the defiled atmosphere of overcrowded towns as soon as the hot weather began they would be spared a large amount of suffering, sickness and mortality. If this cannot be done, the great thing is to keep them as cool as possible in a well-ventilated room. Sunstroke and heat apoplexy, however, are forms of heat fever of a formidable kind, in which the temperature of the body rises rapidly, attains a high figure and is attended with unconsciousness and danger to life. In sunstroke the solar heat acts directly on the brain and spinal cord, whereas in heat apoplexy the attack may occur at night in crowded tents or houses and is commonly attributable to other causes than heat alone. The best methods of guarding against these effects of heat are the simplest and most obvious—viz., garments light in colour and weight and loose enough to admit of free action of the skin and respiratory movement and the circulation of air currents; the occupation of airy and spacious rooms and temperate living; the avoidance of causes of fatigue and depression and an open-air life, together with abstention from exercise and exposure at those periods of the day which common sense would indicate as the least suitable. The important pathological fact to be considered and dealt with when sunstroke or heat apoplexy actually occurs is the exalted temperature of the body; the reduction of this abnormal temperature is the primary consideration, and its accomplishment by the application of cold to the surface—cold water, ice, and currents of air—is *the* matter to be at once attended to. Apart from these phenomena, the immediate and remote effects of heat on the nervous system are sometimes very serious. Maniacal delirium may occur at the time of the attack, and the patient be afterwards very liable to suffer from violent neuralgic headaches, sleeplessness and irritability, and to be unable to remain in heated or crowded rooms or expose himself to the heat of the sun.

REMOVAL OF HUMAN REMAINS FROM THE VAULTS OF A CITY CHURCH.

DR. TRISTRAM, Q.C., Chancellor of the Diocese of London and Judge of the Consistory Court, delivered judgment on the 29th ult. as to the removal of the remains in the vaults of the Church of St. Mary-at-Hill. These comprised a very large number of bodies, the last interment having taken place in 1844. According to the reports of Dr. Sedgwick Saunders, medical officer of health for the City of London, and of Dr. Hoffman, the medical inspector to the Burial Acts Department of the Home Office, and to the evidence of the churchwardens, an unwholesome effluvium permeates the church from these vaults owing to their present condition; and in the opinion of Dr. Saunders such effluvium is injurious and may prove dangerous to the health of the congregation attending the services of the church. These facts having been made, known to the Home Secretary, an Order in Council was made, dated May 9th, 1892, upon the churchwardens, or such other person or persons as may have the care of the vaults under the church, to adopt or cause to be adopted the following measures—viz., that all human remains found beneath the floor of the parish church of the united parishes of St. Mary-at-Hill and St. Andrew Hubbard, in the City of London, shall be removed and forthwith reburied in Norwood Cemetery or in some other consecrated burial ground in which interments can legally take place, the work to be carried out under the supervision and to the satisfaction of the medical officer of health for the City of London. This order was served upon the churchwardens of the united parishes, who applied to Dr. Tristram for directions thereon. The propriety of this conduct was lauded by the learned judge, who explained at considerable length that it was only through a faculty granted by the court over which he presided that the churchwardens could have the care of the vaults of the church. It will be remembered that in the case of St. Botolph's Church, Aldgate, last year, a conflict took place between the ecclesiastical and the civic authorities.

It was proposed to re-inter the dead from St. Botolph's churchyard in the crypt under the church, a proceeding which Dr. Tristram sanctioned, forgetting or ignoring the fact that even in the capacity of the Chancellor of the Diocese of London and of Judge of the Consistory Court he could not over-ride the Order in Council which had closed the crypts against any future interments. As was pointed out in THE LANCET at the time, the only proper course was to remove the remains to the nearest convenient extra-mural cemetery, which after some demur was done. In the present case, as will be seen, the Order in Council requires this to be done, and the Chancellor has granted not only the faculty asked for, but also every facility towards carrying it out, due regard being had to the fabric of the church, and every guarantee being given that such portions of the interior as might be removed should be duly replaced. Thus the dead will once more be removed from the vaults of a city church to a suburban cemetery to be properly buried. It is to be feared that there are still some churches within and around the city whose vaults contain a number of human bodies from which an effluvium permeating the church is simply a question of time. Would it not be well to have a church to church inspection by a competent sanitary inspector, so as to ascertain what is the state of the vaults of each. It may be that in some cases any further mischief may be avoided by entombing the remains in concrete; in others speedy removal to an extra-mural cemetery may be imperative. The possibility of inhaling such an atmosphere as the clergy and congregation of St. Mary's have experienced is a more than plausible reason for preferring a distant church to one in the City.

CHOLERA AT GRANGEMOUTH.

WE have received from Dr. William Walker, medical officer of health, particulars of the case of cholera which occurred at Grangemouth. Dr. Walker was called at 8 A.M. to see a German seaman reported to be ill on board the Hamburg steamer *Helene Sauber*, which had arrived in dock the previous night. The captain stated that at about 3 A.M. the man had been seized with severe pains in the bowels, accompanied with violent purging and vomiting. After several evacuations he became exhausted and fell upon the deck. He was then carried into his berth and rubbed down to relieve the cramps in the legs, from which he suffered greatly. Nothing further was done until 7 A.M., when the captain administered some cholera drops which he had brought on board from Hamburg. After waiting half an hour, as the man seemed quite exhausted, medical aid was sought. Dr. Walker at once recognised the nature of the disease, having seen similar cases abroad. The skin was cold and moist; no pulse could be felt at the wrist; the feet and hands had assumed a bluish colour, the hands having a shrivelled appearance as if from long soaking in water; the lips were purple, the tongue a leaden hue and sensibly cold to the touch. The eyeballs were small and buried in their orbits, the lower lids drooping. The breath felt "like a cold air stream"; the temperature in the axilla was 92°. The man complained of great heat in the epigastric region. His voice was feeble and whispering. He turned from side to side in a very restless manner. Respiration was embarrassed and great difficulty was experienced in distinguishing the cardiac sounds. On examining the alvine discharges on the bed and in his trousers a thin, pale, turbid fluid was found, the characteristic rice-water stools of cholera morbus. From the above symptoms it will be seen that the algide stage had set in before the patient came under treatment; so that all that could be done was to order stimulants, brisk friction to the limbs, and warmth to the body. The man was promptly removed to the Grangemouth Hospital and, when there, ammonia and ether were administered. The patient rapidly became worse, the respiration more impeded and the comatose condition more pronounced. Dr. Fraser of Falkirk saw him shortly before his death, which occurred at 2.30 P.M., and entirely agreed with the diagnosis of cholera morbus. The post-mortem examination made by Dr. Proudfoot of Edinburgh clearly pointed to cholera as the cause of death. Although no details of this examination have yet been supplied to us, from Dr. Walker's careful description there can be very little doubt about the true nature of the case.

"A DANGEROUS REMEDY."

A CORRESPONDENT of the *Morning Post* of Aug. 17th draws attention to the fact that several fluid preparations are in the market termed "weed killers." It is alleged that on analysis these have proved to contain arsenic. The fluid is intended to be poured on garden paths &c., to destroy and prevent the growth of weeds. No doubt the desired object would be attained by such means, but at the same time we fully endorse the contention that the employment of the fluids in question would be a source of danger to health. On evaporation the arsenic would be left in a pulverulent condition, and thus in a most favourable condition to contaminate the atmosphere in the same way that particles are given off by wall papers. If the sale of the preparations is to be allowed to continue, it ought to be on condition that the ingredients are printed on the labels so that those who employ them may know of the danger they are running. We feel sure that the knowledge so obtained would at once in the majority of instances suffice to put a stop to a practice which we think will be found to be injudicious.

OPERATION FOR TRAUMATIC EPILEPSY.

IN the last number of the *Archives de Neurologie* Drs. Manoury and Camuset record at length a case in which trephining was performed for epilepsy, which was subsequent to an injury and a resulting depressed fracture. The case is important on account of the notable failure of the operation to modify the condition in the slightest degree. It must be confessed that from the first it was almost a hopeless case, but it may be useful to describe it as indicating the kind of case in which operation is not likely to be followed by any good result; and as Drs. Manoury and Camuset themselves remark, their observations go to confirm the facts, generally admitted at the present time, that the long duration of attacks and the appearance of dementia should serve as contra-indications of operation. The patient was a young man of twenty-three, with no evidence of neuropathic inheritance except that a paternal grand-uncle had suffered from fits. Except for a convulsion at eight months he was healthy up to the age of fourteen, when he met with a serious accident—a kick from a horse, which fractured his skull anteriorly and laterally. The wound healed rapidly, but three months later he had the first epileptic attack. The attacks recurred and with increasing frequency as he became older. At the age of twenty he suffered from at least one a week, and he was also undergoing a psychical change which had resulted at the time of his admission at the age of twenty-three in a condition of dementia. The attacks which were observed were general, without any aura or motor symptoms indicating local damage to the brain on one or the other side. There was a well-marked cicatrix ten centimetres long over the upper part of the right frontal and parietal bones. At the operation it was found that the bony surface was rough and presented irregular depressions. Similar depressions and prominences were also visible on the inner surface, but there were no adhesions between the dura mater and the bone. The dura mater apparently was not

opened, and consequently the condition of the cortex was not examined. Briefly, the result of the operation was at first to increase the number of fits, but soon the former level was reached. Thus in the first month after the operation there were thirty-six fits, while in the second there were only seventeen, and in the third the same number—a condition which did not materially differ from that which was present before operation. There was no change in the psychical condition, so that the operation may be said to have been absolutely without any beneficial effect on the patient. When the severe character of the original injury is considered and the length of time which elapsed before the operation was undertaken, it is not to be wondered at that the cortex had become so changed that a simple trephining had no appreciable effect on the condition.

SMALL-POX AND INSANITY IN HALIFAX: EMBARRASSMENT OF AUTHORITIES.

IT is difficult to say whether acute insanity in a hospital or small-pox in a lunatic asylum is worse placed. But this is the choice of evils at present before the authorities of Halifax, or rather before the unfortunate patients who are affected respectively with these dire maladies. There are said to be over twenty small-pox patients in the borough hospital, which is already over-full. It contains, among other cases, twelve acute cases of insanity. Some of these have been certified and sent to one or other of the asylums of the West Riding. But the authorities of the asylum have refused to receive them in consequence of the existence of small-pox in the hospital. It would be interesting to know how far they are acting legally in refusing admission to duly certified cases on this ground. One remedy is obvious—the free revaccination of exposed patients and attendants. This, with an isolation ward for any doubtful cases, would remove all difficulty.

THE RETURN OF HYDROPHOBIA.

NEARLY two years have elapsed since the discontinuance of the muzzling order within the metropolitan district in favour of a system of registration. During this period no fresh outbreak of hydrophobia has occurred to suggest the necessity of returning to the former method of prevention. Quite recently, however, a fatal case occurred in Twickenham. Two others have been reported from Saltash, and have naturally given rise to some uneasiness in that district. It is satisfactory to note that the local authorities have acted in this instance with commendable wisdom and energy, and that muzzling has been enforced throughout a considerable area. We may therefore hope that the disease will spread no further. At the same time we must not forget that this desirable result can only be looked for if the sole preventive method of proved efficiency, the use of the muzzle, be maintained for some weeks at least in full operation. The experience of Saltash, moreover, is instructive, inasmuch as it reminds us how hydrophobia, even when it has been apparently stamped out, is apt to reassert its vitality by appearing in an outlying district which was previously as free from taint as from preventive supervision. The implied warning should not be lost on local authorities elsewhere, who may be disposed to trust in an imaginary immunity, and it cannot be doubted that if the use of the muzzle were generally insisted on we should practically abolish a disease which is the essential counterpart of canine vagrancy. While according a due preference however to such obvious measures of prevention, we have also to remember that the principle which underlies them has now, thanks to M. Pasteur, a very real importance in relation to curative treatment. Not one of the fatal cases already mentioned appears to have attracted notice till near its termination. We would therefore the more earnestly impress upon any persons, and especially upon practitioners who may be called upon to deal with injuries of this kind, the necessity of obtaining at the earliest moment, and if needful through local authorities, the opportunity of inoculation. According to a recent report by Dr. Dujardin-Beaumetz, which will be found in our Paris correspondence, the death-rate from rabies, which at one time was 15 per cent., has by the Pasteur process been reduced to 0·88 per cent.

OFFICIAL ACTION AS TO CHOLERA.

WE understand that Mr. Fowler, President of the Local Government Board, on being apprised of the attack of cholera at Hamburg and other western ports of Europe, immediately returned to London, and at a late hour on Wednesday evening conferred at Whitehall with Sir Hugh Owen, K.C.B., Dr. Thorne Thorne, C.B., and Dr. Bridges on the measures which were being adopted and which should be set on foot in the metropolis and at our eastern ports. In 1884 the Metropolitan Asylums Board undertook to make the first provision for isolating cholera in London, and they probably will, as on that occasion, again arrange with the managers of hospitals, workhouse infirmaries and similar institutions so as to meet any emergency that may arise.

GEOLOGY AND DISEASE.

THE conference of scientific societies at Inverness a few days ago seems to have met with a large measure of success. Nine societies were represented at this gathering, and various communications, more than one of them of considerable value, were brought under the notice of the assembled representatives. Some of the papers were of an antiquarian nature, and therefore not of special interest to medical readers; others, again, dealt with geological and botanical subjects. But the paper of most value from our point of view was that of Mr. Alfred Haviland on the "Influence of the Geology and Configuration of a Country on Health and Disease." This paper, which we regret our space will not allow us to notice more at length, was illustrated by large coloured maps to show the regions where certain diseases chiefly prevailed. The subject is of undoubted importance, and though it has not been lost sight of by other medical writers, yet it has received special attention at the hands of Mr. Haviland, whose researches on the peculiarities of diverse parts of the earth's surface, and the atmospheric conditions incident to particular localities, have been of good service.

THE DANGER OF FLATS.

ONE of the difficulties connected with our big cities is the price of land, and the consequence of this is that we are crowding together a number of houses and dwellings on a very limited area of ground. In addition to this it is a "fashion" of the present day to occupy flats in some one or other of the big mansions that have been erected in various parts, in imitation of the monster hotels of London and other large towns. This life in community is considered cheaper and more independent; fewer servants are required, and the flat or suite of rooms can be locked up and the key deposited with the porter from time to time during the temporary absence of the occupants whenever they may desire to be away. Still this system is not without its disadvantages, hygienic and otherwise, as well as its inconveniencies, to say nothing of its possible dangers. In the first place, in many of these flats everything is sacrificed to their so-called reception rooms. There is a dining room large enough for twelve or twenty guests, with a kitchen and scullery accommodation that would not suffice to cook and prepare the food for half a dozen. Then the servants' accommodation is frequently of such a cramped and unsatisfactory character that it is a wonder that servants—whose tastes and

requirements nowadays are often fastidious and somewhat exacting—are willing to live in the apartments appropriated to their use. They are generally dark and placed at the back, without any look-out beyond a blank wall, another block of flats, or the gable end of some building. But from a hygienic point of view, can anything be worse than a mansion of flats where each floor ventilates into those above and below, and the lifts, or, as the Americans call them, the elevators, pump the air from one floor to the other as they go up and down just as if they were designed for the purpose? The separate families living on the different flats form a community under one and the same roof, with a common atmosphere and a common funnel for the circulation of that atmosphere, without any renewal from without, from one flat to the other. A recent catastrophe has demonstrated the danger of this state of things in the case of fire, and it has served at the same time to indicate what might very possibly happen in case of an outbreak of infectious disease. This might spread, like a fire, from one tier to the other by means of the lift, with the same facility as a visitor would make a call, or a portmanteau be transported from the first to the fifteenth floor, by that channel of intercommunication—the lift!

SEATS FOR EMPLOYÉS.

No less rational in our opinion than it is just and humane is a practice which is happily gaining favour with employers—namely, that of providing seats for those of their assistants not actually engaged in serving the public. Some shops are blessed with this privilege, and so also of late have been the vehicles of the Road Car Company. We have always maintained the cause of the employed in both cases. It is easy, of course, to understand the objections which might be urged by its opponents against this course. They would say that there are either no such intermissions of work as would permit of sitting down, or that there ought to be none if the employé were sufficiently alert in seeking and using opportunities of service. It must, however, be apparent to everyone that intermissions, though they may be short, do occur, and that frequently. Besides, a conductor may be so placed that he can easily command a view of the whole thoroughfare beside and behind his car. A revolving seat would afford him all needful rest in his momentary intervals of quiet, while affording also every facility for vigilance. The same argument applies with greater force to shop labour. Here women are largely employed. Some relief from the constant strain of standing or walking to and fro is a mere physical necessity, especially during women's occasional periods of malaise. We fail to see therefore why a reasonable concession to this obvious necessity should not rather help than hinder the success of their efforts.

MISSED BIRTH IN ANIMALS.

AT a recent meeting of the Yorkshire Veterinary Medical Association a case of missed birth in a mare was introduced by one of the members, the history of which is interesting, as the animal had been under observation during the whole time the fœtus was retained, and the period of retention could therefore be fixed. Six years ago the mare was in foal, but owing to having eaten too much rye (which might have had a toxic effect on the fœtus) she had a serious attack of indigestion, for which she required medical treatment. This was near her time for foaling, and the fœtus was then alive, as its movements were noticed externally for three days, when they ceased. She was unwell for some months and lost condition; but at no time were there any indications of approaching parturition. Eventually she recovered and was put to work, at which she continued until last June, when she succumbed to strangulation of the intestines. On examination of the uterus the walls of this organ were found to be fully two inches thick, and in its cavity were the remains of the fœtus in a mummified condition, all the soft tissues having disappeared except some portions of the skin and its appendages, hair and hoofs and tendons. At the meeting much astonishment was expressed at the description of the case, as well as doubt, and the term "marvellous" was applied to it. But instances of missed birth are not so very rare in the domesticated animals, and they have been even recorded as occurring in those which are not domesticated. Had the members referred to Fleming's "Veterinary Obstetrics," a work specially dealing with the subject of gestation and parturition in the domesticated mammals, they would have found ample reference to this subject as well as a number of illustrative cases. We propose to deal more fully with the relations of this case to human obstetrics in an early issue.

PUBLIC VACCINATION AND SMALL-POX.

THE question raised by Mr. Horder in our issue of August 6th is one of the greatest importance. In reference to this matter we have received a communication from a gentleman who is one of the most determined opponents of vaccination, and it would be easy to apply to him and his followers the deprecating phrase in which he refers to people talking on vaccination as they wish to find the facts. His argument may be summarised as follows: (1) Small-pox mostly prevails among the poor; (2) the poor are mostly vaccinated by public vaccinators; therefore (3) there is more small-pox amongst those who undergo the operation at vaccination stations than at the hands of the private practitioner. May we venture to present him with another syllogism. (1) Small-pox prevails least among the "better-off" classes; (2) re-vaccinations are more common among these classes; therefore (3) the paucity of small-pox cases depends on the greater protection afforded by revaccination. When consideration is given to the greater facility existing for the spread of the disease in crowded dwellings we cannot be surprised at its extension amongst the class who live under the "worst conditions." Finally, as regards the alleged superiority of "public" vaccination over "private" vaccination, it may be stated in general terms that the regulations under which the public vaccinator acts are such as to produce that degree of vaccination (as regards quality and character) which has been proved to be most protective against or, if that phrase be objected to, most efficient in mitigating the severity of small-pox. Whereas the private practitioner not being controlled by such rules may certify as "successful" a single insertion followed by a vesicle. Of course there are numbers of practitioners who carry out vaccination in private practice as efficiently as it is done at the vaccination stations; but we venture to think that much of the discredit of vaccination and many of its accidents are due to irregular and careless practice.

TRAUMATIC TETANUS AND ZINC SALTS.

A CASE of some interest is published in a recent number of the *Australasian Medical Gazette* by Dr. J. Sidney Hunt of Queensland. The case was one of traumatic tetanus, arising after amputation of a foot on account of a compound comminuted fracture of the fibula, which, owing to the long time which elapsed between the accident and the time of admission, had given rise to a putrid and very offensive condition at the seat of injury. The first symptom of anything serious occurred on the fifth day after the accident, when the patient complained that his teeth were tender—a condition which he ascribed to his clenching them too tightly during

sleep. Two days later there was manifest rigidity of the muscles of the jaw, and this was quickly followed by very severe general tetanus. The treatment of the case is the most interesting part of it. Dr. Hunt has had favourable experience of the usefulness of zinc salts in chorea, which he believes to be due to some morbid condition in the basal ganglia. Similarly, he suggests that tetanus may be due to a paralysis of a moto-inhibitory mechanism in the same ganglia and he conceived that similar treatment might be efficacious. Accordingly, sulphate of zinc was administered in steadily increasing doses, until as much as two scruples were being given every six hours. There was no vomiting or other inconvenience and nothing unusual was noticed except a certain amount of anæmia. Opium was also used very freely by the mouth. Under this treatment the patient recovered, but it should be mentioned that antiseptic dressings and irrigation were assiduously used to the stump in which the mischief started. The case is very interesting and we congratulate Dr. Hunt on the result. Whether its favourable result was due to the zinc or the opium or the attention which was given to the stump it is difficult to say, and Dr. Hunt is not dogmatic on the subject. It is not easy to apportion to each means its share in the result, but it is at least significant that the zinc salt, even in the large doses in which it was given, failed to produce the nauseating effects which are usually expected from it, and its apparent efficacy in one case of a grave and usually fatal condition should not be lost sight of in the treatment of similar cases in the future.

THE SPECIAL TRAINING OF NURSES FOR CHOLERA.

THERE can be no doubt that, whether we in England do or do not escape from a visitation of cholera during the present epidemic, we must leave nothing undone to ensure our being ready to meet and to deal with the disease should it invade our shores. Of hospital accommodation, so far, at all events, as the London district is concerned, we shall probably have enough for the pressing needs of the population which would quickly follow upon an outbreak of cholera in the metropolis. However, it is not improbable that unless we at once set to work to prevent such an event we may suddenly find ourselves with cholera in our midst and a pressing want of nurses properly trained to meet the emergency. Were this to happen we should only have ourselves to blame, for both the nurses and the teachers required to train them are to be had in sufficient numbers if only pressure is applied in the right way and in the right quarters. It does not appear reasonable to pause in a time of danger, to consider seriously whether cholera spreads by means of human intercourse. It is practically admitted on all hands that it is chiefly by this means that cholera is now spreading over Europe and Asia. Without, however, going into matters controversial in nature, we desire to point out the urgent need there is for the prompt and thorough training of nurses in sufficient numbers to meet any emergency which might be caused by a sudden outburst of this plague in England. It is not necessary for us to point out that it is in dealing with sporadic cases of cholera that the greatest care is required; and it is not unreasonable to teach that by proper attention to the first victims of the disease an outbreak of it in epidemic form might be altogether prevented. It is absolutely certain that efficient medical men and trained nurses are both necessary for this purpose. We are strongly of opinion that classes should at once be opened for the teaching of nurses already trained in ordinary work for the special work which they would be called upon to do were cholera to come upon us. This special training of nurses should be confided to men who have themselves had practical experience of cholera, and who have shown by their published work that they have given thought to what should be done to prevent, if possible, the spread of that disease in a community, and in any event to limit to the utmost its ravages. If full benefit is to be secured from the provision we have suggested, it cannot be too earnestly insisted on that the plan must be carried out immediately. Should we happily, as was our good fortune during the last European epidemic, escape a visitation of cholera, no harm will have been done by our taking all necessary steps to meet any emergency.

"CURES" FOR INEBRIETY.

IT may interest our readers to know that Dr. Keeley has issued a writ against the Editors of THE LANCET, claiming damages for libel. Our solicitors have of course accepted service of the process.

EARTHWORMS AS CARRIERS OF INFECTIVE GERMS.

TUBERCULOSIS may be diffused in many ways, as bacteriological research is constantly reminding us. Its bacilli may be stored and spread by subsoil worms, according to a series of experimental studies lately completed by MM. Lortet and Despeignes. These worms, for several months and in various parts of their organism, can preserve the bacilli in question and reconvey them to the surface of the ground. Early in their researches MM. Lortet and Despeignes were confronted with the objection that in garden soils, in which worms abound, the bacilli of septicæmia, great in number and in activity, are also met with—bacilli which, on experiment by inoculation, are capable of developing fatal disease, prior to the tuberculous process. This objection, however, they were able to dispose of by having recourse to a dry, silicious earth passed through a fine sieve, in which bacilli are not to be found; while their next step was to place the tuberculous substance at the bottom of vases filled with this earth, on the surface of which they sprinkled a layer of white and very pure sand; and finally, they covered everything with a sheet of paper. After a few days the worms which were concealed in the earth at the bottom of these vases came up and deposited their intestinal evacuations on the sand—evacuations which MM. Lortet and Despeignes succeeded in collecting without risk of contamination, and in finally inoculating in a number of guinea-pigs. In consequence of these inoculations there was developed in the guinea-pigs a generally diffused, very distinctly marked tuberculosis. The experiment, far from a complex one, was successful in demonstrating that earthworms can reconvey to the surface of the soil not only the products of their digestion, but also together with these, the bacilli of tuberculosis in full possession of their infective virulence. A similar fact, it will be remembered, was established by M. Pasteur in his bacteriological studies on charbon. For this latter disease, therefore, and in no less degree for that of tuberculosis, it is conclusively indicated that their infective débris should not be consigned to the subsoil without complete destruction of their germs. Unless this destroying process has been practised such débris may be seized upon by earthworms stored in their organisms and reconveyed to the surface, to become again the source of a new contagion.

FOREIGN UNIVERSITY INTELLIGENCE.

Chicago (Rush Medical College).—Dr. A. C. Cotton has been appointed to the Professorship of the Diseases of Children.

Florence.—Professor P. Grocco of Pisa has been appointed Professor of Clinical Medicine.

Gratz.—Dr. Carl von Rokitansky of Vienna has been appointed to the chair of Midwifery and Gynæcology.

Königsberg.—Dr. Kuhnt of Jena has been appointed to the chair of Ophthalmology.

Lille.—Dr. Doumer has been appointed to the chair of Physics.

Munich.—Dr. H. Rieder has been recognised as *Privat-docent* in Medicine.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Bechet, Honorary Professor in the Nancy Faculty of Medicine.—Dr. Dahnhardt, *Privat-docent* in Neurology in the University of Kiel.—Dr. B. W. MacCready, Professor of Therapeutics in the Bellevue Hospital Medical College, New York.

THE danger attending the indiscriminate and immoderate use of ice-creams was illustrated a day or two ago in the case of a boy whose death formed the subject of an inquest held at the Islington Coroner's Court. The medical evidence showed conclusively that the cause of death was peritonitis, and the coroner, in his comments on this case, suggested that some systematic inspection should be made of the places where ice-creams are manufactured. This subject, we may remind our readers, has not been overlooked by us in the reports on various articles of food which have appeared from time to time in our columns; and it may be well therefore to draw attention to the report on this particular article of diet as published in THE LANCET of Oct. 18th, 1879, and some remarks on the same subject to be found on Sept. 1st, 1888.

MRS. MARGARET ANNE NEVE was born on May 18th, 1792, and was married in 1823 at Rouge Huis, Guernsey, to Mr. John Neve of Tenterden, Kent, who died in 1849. She has travelled much, having visited every country in Europe save Portugal. She is now in good health, hears well, and sees well even without glasses; she has neither ache nor pain, and walks to church and to market. Her mother lived ninety-eight years and a half, showing the element of heredity as so many long livers do. Mrs. Neve's habits have been always simple and temperate, but not those of total abstinence.

THE QUEEN has been pleased to confer on the Right Hon. Sir Lyon Playfair, K.C.B., the dignity of a Baron of the United Kingdom. The son and brother of medical men, and occupying for many years a prominent position as a teacher of one of the collateral sciences of medicine, Baron Playfair has our sincere congratulations on receiving such a mark of honour.

THE members of the medical profession will receive with lively satisfaction the announcement of the appointment to a seat in the Privy Council of Professor Huxley. Such a recognition of the claims of medicine is the more acceptable as the opportunity of recording such an appointment is comparatively rare.

AT an extraordinary general meeting of the British Medical Association, held on the 24th inst. at the offices of the Association, the resolution passed by the general meeting at Nottingham altering the by-law and admitting women to be members of the Association was confirmed by a large majority.

AT a meeting of the Court of Examiners of the Society of Apothecaries of London, held at the Hall on Thursday, Aug. 18th, Dr. Thorowgood in the chair, a presentation of plate was made to Dr. J. Sherwood Stocker on his resignation of the chairmanship of the court

THE advent to St. Petersburg of Professor Virchow, who has arrived from Moscow to attend the Anthropological Congress, elicited marked manifestation of enthusiasm on the part of *savants* at the Russian capital. A large number of physicians and members of scientific societies greeted his arrival and made elaborate preparations to secure the comfort of their illustrious guest, in whose honour it is proposed to give a banquet at an early opportunity.

THE medical department of the Privy Council has issued an order to registrars of death requiring them before registration to make special inquiry as to whether the person who attended the deceased before death was qualified or not.

BRITISH INSTITUTE OF PUBLIC HEALTH: MEETING AT DUBLIN.

ON Wednesday, the 17th inst., the proceedings of the Sanitary Congress commenced at the College of Surgeons under the presidency of Sir C. Cameron. Dr. Haughton, Sir John Banks, K.C.B., Dr. Grimshaw (Registrar-General for Ireland), the Right Hon. the Earl of Meath and Sir F. Maccabe were elected honorary Fellows of the Institute. Professor A. Roche was made a member, and Mr. O'Meara (medical officer of health, Carlow), Mr. T. W. Berry, C.E (Kingstown) and Mr. W. R. Graves (Dublin) were admitted associates. At half-past ten Sir Charles Cameron held a reception, and at eleven o'clock the proceedings of the Congress were entered upon.

Sir CHARLES CAMERON, in his opening address, said his first duty was to introduce the British Institute to the city of Dublin, and in doing so it would be necessary to give a short biographical sketch of both. During the few years that the society, under various names, had been in existence he ventured to claim for it that it had done good and substantial work. To a great extent it was mainly through the instrumentality and the exertions of the society that the qualifications in public health and in sanitary science were made registrable qualifications, for which diplomas or degrees were issued by the various universities and medical corporations. Lengthened correspondence and interviews had taken place between the persons connected with the introduction of the last Medical Act and the institute, and the result was that the qualification in public health and state medicine now shared with those of the great departments of the healing art the honour of being the subject of special registrable qualifications. It was also to a large extent due to the exertions of this society that a rule had been made by which during this year and the succeeding years no one could be a health officer of any town of 50,000 inhabitants or upwards who was not possessed of a registrable qualification in public health. He thought that they in Dublin ought to be proud that the first qualification of this kind made before it was a registrable one was due to the University of that city, one of whose greatest ornaments—Dr. Haughton—he was sure they were all glad to see amongst them that day. He might also claim for the institution in whose building they were assembled that it was the first in Europe to establish a chair of Hygiene. However, although the institute had done much good work in the past, it had still some important work before it, and he was happy to say it was steadily increasing the number of its members. There was a general idea that Dublin was situated under peculiarly happy circumstances in reference to health. No doubt the environs of the city could hardly be surpassed by any other, but the city itself was not so happily circumstanced. Dublin had been well described on one occasion by Dr. Haughton as "a waterlogged city situated in a mud valley," and he thought it a very accurate description. The average death-rate in the Dublin metropolitan area in the period 1876 to 1880 was 31·76 per 1000—an enormous rate. In the city the rate was 34·11 per 1000 and in the suburbs 23·39. During the period 1881 to 1885 the death-rate in the whole registration area was 27·32, in the city 30·34 and in the suburbs 19·68. In the period 1886 to 1890 the death-rate in the whole area was 26·3; in the city, 28·86;

and in the suburbs, 19·86. The effects of sanitary improvements were not immediate. It took a long time to undo the influence of over-crowded dwellings, want of proper drainage and other insanitary conditions in the health of towns. In the period 1876 to 1880 the death-rate from the principal zymotic diseases in the whole registration area was 5·29 per 1000—the rate in the city being 5·83, and in the suburbs 3·27. In the next period, 1881 to 1886, the rate in the whole area was 3·06, in the city 3·42, and in the suburbs 2·16. In the period 1886 to 1890 the death-rate in the whole area was 2·87—in the city 3·2, and in the suburbs 2·02. Last year was registered the lowest death-rate for zymotic diseases in the city. It was only 1·7, and when it was considered that in 1879-80 and in 1881 it was 7 or 8 per 1000, he thought it might fairly be claimed that Dublin had made progress with regard to preventable diseases. The subject of typhoid fever was of great interest to Dublin on account of the fact that while all other zymotic diseases had been steadily decreasing typhoid fever had not only not decreased, but had actually increased. It was found, however, that this was not the case with regard to most of the towns of the United Kingdom. Sir Charles Cameron had put himself in communication with fifty of the medical officers of health of the principal towns in England, and he had found that the mean annual death-rate in those fifty towns for the last five years from typhoid fever was 3·2 per 10,000. The rate in the different towns varied considerably—from 0·7 per 10,000 to 5·2 per 10,000. Why did typhoid fever exist so much in Dublin and increase instead of decrease? Was it because the water system was bad or the drains and sanitary accommodation worse than in other towns? He really did not think it was. He knew it was a fashionable thing when a typhoid fever case occurred to attribute it to polluted water or defective drainage; but the history of typhoid fever in Dublin showed there must be other causes at work. The sanitary accommodation of the houses might be defective, but it was defective everywhere, and that was not sufficient, he thought, to account for the fact that the death-rate from typhoid fever was seven or eight times as great as it was in many of the English towns, which he knew from his own personal experience could not compare in point of public sanitation with the city of Dublin. There must be some other cause, and his theory was that it depended on the sewage-saturated condition of the soil itself. He had come to the conclusion, after carefully thinking over the matter, that at all events in investigating the phenomena of typhoid fever in Dublin it must be agreed that it was of a miasmatic character—that it was malarious and that the germs rise out of the soil. There were some very poor places situate on the gravel soil that had very little typhoid fever no doubt, but there was the geological fact that the chances were 50 per cent. greater of getting typhoid fever on the gravel soils than on the clay, and the cause of that was that it was easier to dry up the superficial layers of clay on the gravels. He did not think it was possible to eliminate the germs from a perfectly wet surface, because they would not go out of the water save under very exceptional circumstances. Therefore, in those clay places the micro-organisms could not be disengaged, but there were terrific currents of underground air which must come up, and often with great force; and when the soil was sufficiently dry to enable these micro-organisms to be disengaged or detached they came up into the atmosphere, and his conviction was that in the very streets of Dublin it was quite possible to get typhoid fever. The soil of Dublin had been polluted by a system of storing up human excreta for centuries, the result of which was that in the low-lying soil, badly drained as it was, enormous accumulations of animal matter of an organic character had occurred. In the great cities of America malaria was disappearing with the advance of population, but it was rapidly being replaced by typhoid fever; and as the ground was being saturated with organic matter of the animal kingdom it was found that typhoid fever prevailed and had become one of the dangers of the population of the United States.

Discussion on the Etiology of Typhoid Fever.

Mr. GRAVES dealt with the principal media of conveyance of typhoid fever in Dublin—defiled water, air polluted by exhalation from foul and unventilated sewers, ground air from a filth-saturated soil, contaminated milk, food and bed-linen. He thought that the introduction of the Vartry water ruined the drainage of Dublin, for simultaneously with the turning on of the water the inhabitants and manufacturers ceased to pump the water out of the ground. The three principal factors in keeping up the death-rate from typhoid fever in Dublin were, he believed, defective and leaking drains an sewers, and stagnant and unused polluted wells, whence high-level polluted subsoil water, the result of the two first named causes.

Dr. F. J. ALLAN believed that Sir Charles Cameron's theory was one which should be looked upon as correct. He was surprised that the suburbs did not coöperate with the city in regard to the main drainage.

Dr. MAGENNIS said they should insist, as far as lay in their power, on the sterilisation of milk. It was a very frequent source of conveying contagion.

Bacillus Typhosus.

Dr. MCWEENEY read a paper on this subject and discussed the view put forward by Professor Arloing that there is no special microbe of typhoid fever, but that certain organisms inhabiting the body are capable of assuming disease-producing properties and may cause typhoid fever. Dr. McWeeney drew attention to the fact that exposure to strong sunlight was not fatal to all kinds of bacilli, and that this fact was of great importance in its application.

Cholera.

Dr. HAUGHTON submitted that cholera patients ought to be admitted to the general hospitals instead of being placed in special cholera hospitals.

Dr. LITTLEJOHN was of opinion that there would be a general stampede from the general hospitals if cholera patients were taken there.

Dr. POTTER (Indian Army) said that his experience in India showed that cases of cholera ought invariably to be isolated, and every arrangement ought to be made to protect the medical officers and the attendants from the disease.

Dr. MAJOR GREENWOOD said that there was a considerable agitation at present in London with regard to a better water-supply. The present was a good time for pressing the matter forward. In London the water-supply was worse than that of Edinburgh, and if cholera came to-morrow it would cause great ravages.

Professor SMITH said that from his own knowledge he was sure that the sanitary arrangements of the metropolitan area of London were thoroughly efficient; attention was now being directed to the water-supply, and so far it had been found that the case against it was exceedingly weak; he did not think that the people of London had really anything to fear from their water-supply in the case of an invasion of cholera.

Sir CHARLES CAMERON, in closing the discussion, said the death-rate of England had remained stationary until the passing of the Public Health Act of 1866, which was followed by the vastly more important Act of 1875, in which the change of the word "may" into "shall" was followed by the most beneficial results. It was far better to use the staffs of the different great hospitals of the city. Dublin was the most hospitaled—and he hoped the most hospitable—city in the world, containing 40 per cent. of the hospital beds of the country, and it would be far better to use these hospitals than to put up sheds. If there were no objection to admitting cases of typhoid fever to the infectious wards of hospitals, there could be no objection to admitting cholera cases. In response to a circular which he had sent round to the hospitals, he had ascertained that if cholera came on the morrow hospital accommodation could be provided for between 400 and 500 patients, and there was a ship near the mouth of the river in excellent order, with accommodation for twelve patients, which could be used for cases on board boats entering the harbour.

Registration of Plumbers.

Dr. LITTLEJOHN moved a resolution approving of the national registration of plumbers, and in the course of his remarks said that plumbing in Scotland was superior to that in England, and one result of national registration would be to raise the standard of plumbing in the latter country.

Dr. ALLAN seconded the resolution, which was carried.

Influence of Sewage on Milch Cows.

Mr. J. BYRNE POWER read a paper on this subject, in which he contended that cows, like human beings, might become diseased by drinking impure water, and, being diseased, might be capable of disseminating it through their milk.

THURSDAY, AUG. 18TH.

Sanitary Legislation.

Dr. MAJOR GREENWOOD read a paper on this subject. He traced the progress of sanitary legislation from the time of James I., and said that one great mistake of sanitary legislation was that too frequently the powers for carrying out the provisions of the Act were placed in the wrong hands; the enforcers of the law were those most interested in maintaining the abuses of the law which it was intended to redress. In many cases action could only be taken by the local sanitary authority, and when it was considered that the authority was not unfrequently made up of those to whom the enforcement of the law would mean a considerable pecuniary loss, they could hardly be surprised at the lack of energy so frequently shown in administering those laws, or at the unpopularity incurred by a too active medical officer of health who allowed his zeal to outrun his discretion.

Dr. LITTLEJOHN (Edinburgh) moved the following resolution:—"That, as the outcome of these admirable papers, this institute should desire to express their unanimous opinion that the time has now arrived when a responsible minister of public health should be appointed, and that the General Health Acts of the country should be consolidated and administered by a responsible central authority; and finally, that a thorough sanitary survey of the kingdom should be instituted."

Professor SMITH seconded the resolution, which was adopted.

The Notification of Infectious Diseases.

At 2.30 the Congress reassembled.

Professor SMITH (London) opened a discussion on this subject. He observed that Parliamentary legislation of recent years on this subject was remarkable. The Act of 1889 made it compulsory on all medical practitioners and heads of families to notify the occurrence of all infectious cases coming within their knowledge. No one would dispute the importance of that Act. At present the responsibility of the notification rested with the head of the family and the medical practitioner, but he was of opinion that the Act would require amendment, inasmuch as in some cases the parents did not consider it necessary to call in a doctor in cases of measles, and in those cases it should be made compulsory to notify the occurrence of the disease.

A resolution in favour of including measles in the list of diseases to be compulsarily notified was adopted.

Dr. C. R. TICHBORNE read a paper on the Sulphite of Zinc as a general Antiseptic in Typhoid Fever. Some years ago, he said, he introduced sulphite of zinc as an antiseptic for general use, and a few years since he and Dr. F. Heuston had applied this salt to fabrics for antiseptic dressings with marked success, as it could be deposited in the fibre of the material in a semi-insoluble condition. Its action on wounds was marked, as possessing both the germicide action of zinc salts and the antiseptic action of the sulphites combined with the healing properties of oxide of zinc.

Sir CHARLES CAMERON read a paper, which was illustrated by experiments, on the Use of Carbonic Acid Snow as an Antiseptic.

Mr. R. HAMMOND addressed the Congress on the sanitary advantages of the Electric Light, and after a vote of thanks to various bodies the proceedings terminated.

THE ETIOLOGY OF TETANUS.

A CASE of traumatic tetanus which has recently occurred at Blackmore, in Essex, and has been made the subject of a coroner's inquest, presents features of considerable professional interest and importance. On Monday, July 4th, a lad named W. H. Thomas, nine years of age, whilst at work on a farm, had his right foot trodden on by a horse. There was a slit in the boot across the toes at the time of the accident, which resulted in avulsion of the nail of the great toe and some little effusion of blood. After the housekeeper of the farmer for whom the lad was working had dressed the foot he walked home. For a few days the toe was dressed with Friar's balsam and subsequently with some "healing ointment" made by a woman in the village. The lad was at school on Sunday, the 10th, on Monday, the 11th, and on Wednesday and Thursday, the 13th and 14th. At half-past seven on the morning of Thursday, the 14th, he complained of feeling ill. He had a very stiff neck, a strange look and said that he was sore and ached about his shoulders, face and head. He attributed his illness to a beating which he said he had received from the schoolmaster on the Wednesday because his father had kept him away from school. On this matter and on the reason for the caning there was a conflict of testimony. The lad's brother and one or two other boys stated that on the Wednesday the lad was caned by the schoolmaster, who also took hold of his chin and hit his head on the desk, whilst two other boys deposed that the thrashing took place on Thursday. On the other hand, the assistant mistress, who was present during the whole day, the schoolmaster himself and several pupils averred that the boy had never been caned at all. The mother never examined her son's back or asked the doctor to look at it, and no one during life saw any mark either upon the head or the chin. On the evening of the 14th Mrs. Thomas took her son in a cart to see Dr. White of Kelvedon Hatch. The toe had then nearly healed. Dr. White said the boy was suffering from lockjaw, which might be dangerous, prescribed for him, and directed him to be taken home and kept in bed. He attended him until his death, which took place on Sunday, July 31st. During his illness the boy complained frequently of pain in the right leg and found considerable relief when the leg was rubbed. The inquest was opened by Mr. J. C. Lewis, the coroner, at the "Leather Bottle Inn," Blackmore, on Wednesday, Aug. 3rd, and was adjourned till the following day when by the coroner's order Dr. White made a post-mortem examination. Externally the only mark found by Dr. White was a severe bruise running across the chin for three or four inches, and this bruise was seen subsequently by the jury. A new nail was partially formed on the big toe of the right foot, but some discolouration remained. The organs generally were healthy, including the brain, but there was a considerable amount of venous congestion, with serous effusion on the surface and base of the brain. When asked at the adjourned inquest his opinion as to the cause of the tetanus Dr. White said: "Taking the bruise on the jaw into consideration, and assuming there was injury to the side of the head caused by a blow, he could see no other way to account for the tetanus than to say that that was the cause of death, and in his opinion the injury to the toe had nothing to do with the tetanus." At this stage in the inquiry the coroner adjourned the inquest to the 22nd instant, with the express purpose of having the medical evidence fully weighed and considered, and the solicitor, Mr. H. W. Gibson, of Ongar, who appeared on behalf of the schoolmaster, acting on instructions from the National Teachers' Union, asked Mr. Rivington and Mr. Bland Sutton to give evidence when the inquest was resumed, a full report of the evidence having been placed in their hands. Mr. Rivington said that in his opinion the cause of the tetanus was the injury to the right toe caused by the horse treading upon it on July 4th. With the exception of one or two cases of tetanus arising without any evident cause, or idiopathic cases, in all the cases of tetanus which he had seen there had been a wound. He had never seen tetanus arise after a simple bruise or a simple fracture, or from a fall or a blow. A few cases of the kind were recorded in medical works, some being cases reported a good many years back. But he regarded these cases with a good deal of doubt. Very slight wounds might be followed by tetanus—slight scratches, if made with a dirty stick, rusty nails running into the foot, &c.—but a wound of some kind was generally a necessary condition. Tetanus often arose from earth getting into wounds or from wounds in a foul condition. In the present instance the interval between the injury to the toe and the onset of the symptoms was about the average interval for the onset of traumatic tetanus—nine or ten days. It might come on in three or four days, or after as many weeks. A splinter might enter the soft parts and remain imbedded for some weeks before tetanus supervened. He considered it in the highest degree improbable that tetanus could come on within twenty-four hours after an injury; and therefore, assuming that the schoolmaster had caned the boy and hit him on the head or struck his chin upon the desk, these injuries would not account for the tetanus. From the evidence it seemed to him that the tetanus had commenced before the alleged caning; and as no one, not even the medical attendant, had seen the large bruise on the chin during life, it was probably due to post-mortem staining from some cause acting after death. A bruise would not come out after death more than a fortnight subsequently to the infliction of an injury, no sign of the

injury having appeared during life. The cause of tetanus had now been demonstrated to be a poison produced through the agency of a micro-organism or microbe—a bacillus common both to man and the horse—and it took some days for the generation of the poison. This evidence was fully corroborated by Mr. Bland Sutton, who expressed his belief that it was impossible for a mere bruise to occasion tetanus. Mr. Lewis, the coroner, who gave careful attention to the medical aspects of the case, summed up the evidence in a very able and lucid manner, and the jury returned a verdict that the deceased had died from tetanus caused by the injury to the toe. Owing to the strong local feeling which had been aroused they were a good while deliberating. Had they attributed the tetanus to the blows said to have been inflicted by the schoolmaster, the coroner would have been obliged to commit the schoolmaster for manslaughter. This result would have been equally deplorable and oppressive; for as the injury to the toe was quite sufficient in itself to cause tetanus and the tetanus supervened after the regular average interval, and in accordance with the surgical experience available at the inquest, it would have been altogether wrong to have attributed it to injuries, not in themselves established, which have only here and there been set down by medical authorities as the sufficient cause of tetanus.

CYCLING AND VITALITY.

II.—ACCIDENTS.

IT was not to be expected that our opening article on "Cycling and Vitality" would pass without challenge, and we were quite prepared to read the argument which every partisan invariably advances, whether he have evidence of its truth or not, that we were wanting in what is called practical knowledge of the art of cycling and the ways of cyclists. For the sake of cycling and of cyclists we wish it were the fact that our knowledge were not practical. Unfortunately it is founded on nothing but the practical. We know what cycling means in its outside working, but this is little compared with what we professionally know of it from those sufferers from the practice who do not tell always their most intimate friends the whole story of their cycling experience. Men who enter on cycling exercise find for a short time that it seems to give them a new kind of life. They have been confined to the counting-house, the place of business, or the study; they have, so to say, grown old in their pursuits, and parts of their nervous and muscular system are wearied with the monotony. This new exercise comes to them and all is changed. They discover, without understanding the reason, that they have muscular and nervous powers which have hitherto been concealed. They can cover as much ground in a week on the machine as they could previously cover in a year by their own muscular powers. Their eyes fall on new pastures, and their intellect is awakened to lessons read without books of which they have hitherto had no knowledge except at second hand, and then imperfectly. In addition, by reason of their fresh acquisition, they are brought into a new social life; they meet associates to them entirely new, some younger, some older than themselves, but all "full of cycling"; they learn from these new comrades the names and works of great riders—of one who has broken his own record by so many seconds in a race of over four hundred miles in twenty-four hours; of another, perhaps a lady, who has ridden a hundred and fifty miles between sunrise and sunset. These persons they find exalted into heroes and heroines of the wheel, and there is enkindled a spirit of competition oftentimes stronger than the intellectual spirit itself. Then comes the competitive effort. A book is obtained and kept, in which each day's work is recorded from the beginning of the year to the end. A man utterly unknown out of his own little circle suddenly becomes a man of mark to a new and wide circle. He has ridden, say, some thousands of miles in one year, or won a race, or made a great excursion; he is a man to know in the wide and ever-widening cycling world. Here are the inducements to hard cycling, new exercise of body, new exercise of mind and new competitive ambition. Far be it from us to say a word against any of these good things. We enter into them all, even in THE LANCET; we aim to make THE LANCET as varied as it can be in its sphere, and we are ambitious that in its sphere it shall have no successful rival. We are therefore the last to find fault with work and competitive work even of a severe kind.

But what we find happens to the cyclist, and what we warn him against, is that he is apt to let the mere competitive effort take the place of everything else, so that at last he puts pace before peace and strives to conquer the element of time, against which the whole human family is struggling, with unequal odds. In every effort, intellectual or physical, the man who tries to conquer time, to do more within a given period than he has the natural capacity to perform, is beaten from the first, and in cycling that is the fatal strife. As a contemporary said a few weeks ago *à propos* of these remarks—"One can understand the insidious strength of the temptation to indulge overmuch in this fascinating form of exercise. But the greater the temptation the greater the need of prudence and self-restraint." We who look on as well as practise the exercise see the necessity for this advice with increasing evidence each month and year; it is day by day becoming more obvious, on the road, on the track, in the streets of the metropolis and other cities, that cycling is breaking its own record in evidence before the coroner, before the physician and surgeon, before the magistrate, before the world at large, cycling circles alone excepted.

We pointed out in our last article certain physical catastrophes from extreme competitive riding. We turn to-day, for a moment, to the great increase of accidents immediately occurring and often immediately fatal during the very act of riding. These increase daily, not from faults of the machines ridden—for, thanks to the skill, care and competency of the industry that turns out cycles, there is the most admirable safety work in this direction that ever was produced—but from the fault of the riders themselves; chiefly the fault of competition against other riders and against all sorts and conditions of travellers—travellers on horseback, in carriages, by omnibus, and on foot. Lookers-on say there is marvellous precision in riding in the crowded streets. They may well marvel; but in this regard success itself in meeting and evading obstacles does not mean winning; it means wear and tear of the constitution beyond anything that can be accredited when it is carefully observed. We have ourselves ridden under these trials, and we know the effects. During the feat the most active of the senses are strained to the utmost: the ear is strained to catch every voice and sound; the eye is strained to meet every danger as well as to avoid being a cause of danger to others; the sense of touch is equally strained; the mind and the body are at full strain and the muscular sense at its highest mark. So long as the tissues are young and elastic this feat is for a time possible, but it is doomed even in the young to early failure and it makes the young prematurely old. To the middle-aged, nay to those who are but just matured, the feat is dangerous, though a collision may never take place. There is the internal and the external strain; there is the after lassitude from what Dr. Kolb has ably described as "the nervous insufficiency" of fatigue; and there is the after waste of the nervous fever which follows the effort. Under these strains it is little wonder that riders die whilst riding without actual collision; little wonder that the papers should report how a well-known cyclist was found dead by the roadside with his machine beside him. Framed in a manner not calculated to bear these strains, though they be less severe than riding daily through a London thoroughfare, this gentleman, from nervous insufficiency, failed and succumbed under an exercise the too enthusiastic partisans of which say we have no right to criticise, albeit it is fatal to their best of comrades.

These are accidents without collision. To them must be added accidents with or during collision—accidents of two kinds when correctly defined. Some of them are purely accidental and unavoidable, such accidents as no skill and no presence of mind can meet. There are others due to the temporary absence of skill or presence of mind of the rider—failure, in fact, arising from the nervous exhaustion or nervous insufficiency referred to above. The best of riders may be placed *hors de combat* from this last-named cause; at a critical moment some movement he brings skilfully into play under ordinary circumstances fails of its purpose; a little water on the roadway makes his wheel skid—a lamentable and fatal instance of this sort occurred only last week in Kensington—or some similar mishap takes place; his skill is baffled, there is no time to rectify the mischance and all is over.

From such modes of accident, fatalities and injuries are largely on the increase. Our table is becoming crowded with reports of cycling calamities. In London the number of accidents from cycling, amounting to 36 in 1881, ran up to 360 in 1891. But from 1891 up to the present time the number has increased out of all previous proportion, and is so steadily increasing that there is no help for it but new legislation of a preventive character for the equal protection of the public and of cyclists themselves.

We have endeavoured to ascertain whether in cycling accidents the danger is greatest to the rider or to those with whom he comes in contact. On this question there is, we think, but one answer: the danger is chiefly to the cyclist—a fact which has been the real cause of delay in legislation. The cyclist, accepting all risks, does not ask to be protected by law. He pays the penalty severely enough, for, as a rule, they are no commonplace injuries to which he is subjected. A broken limb is a puny penalty. The rider once off his balance is indeed in a plight. His governing power is lost; if he be riding fast his reduction of speed, assuming that the break is under his control, must be effected in the most careful manner; in collision he has usually to meet a structure more massive and steadily resistant than his machine, while he, a part of the machine virtually, goes crash with it. The shock is general, and therefore so frequently fatal. It is of all shocks, save the crash of a railway collision, that in which the rider is most helpless as well as most imperilled.

BURIAL AND CREMATION.

THE contest between earth and fire as the better mode of disposal of the dead still continues. Whilst it is very satisfactory to see public attention concentrated on what is one of the most important questions of the day, it is to be lamented that so much bitterness should be imported into the controversy, since the advocates of either mode have made out a very strong case. Those in favour of cremation maintain that by means of the furnace an adult human body can be reduced to ashes in the space of little more than one hour without the slightest offence to the living. They urge, moreover, that by their rules, in addition to the ordinary medical certificate of the cause of death and the registration thereof, they have an independent medical inquiry which so far has effectually safeguarded them from consigning to the crematorium the body of any victim of foul play. In addition to this rapid disposal of the dead body by fire and this safeguard from its possible abuse, they point with both force and reason to the comparative economy with which their mode may be adopted compared with that of burial. The crematorium does not occupy a large space and may be located in any existing cemetery. No purchase is required by the ratepayers of large portions of land at an enormous cost, nor is there any possibility of poisoning the adjacent water-supply. The value of these negative advantages cannot be overlooked, and it is not surprising that from their standpoint Sir Henry Thompson, Sir Spencer Wells and other advocates of cremation should regard with impatience the objections urged against it by the advocates of burial. The most formidable of these is the medico-legal one. In a recent case, still *sub judice*, the body of a female was exhumed some months after burial and strychnine was detected in the stomach and other viscera. The opponents of cremation naturally say that incineration would have destroyed all means of discovering the poison, and so would have tended to defeat the ends of justice. But the supporters of cremation might very fairly urge that in this case their independent inquiry might and most likely would have revealed the fact that the death took place under circumstances demanding an inquest, and that cremation would have been deferred till the coroner's order had been obtained. And while refraining from comment on a case which has still to be tried, it may be stated with perfect propriety that under the circumstances the case should have been reported to the coroner. Burial possesses the claims of greater antiquity, being so easy, so natural, so simple as almost to suggest itself, and it is a well-known fact that some of the lower animals and even insects have been observed to bury their dead with great care. Burial in the earth was termed by the heathens, being "restored to our mother's lap," or "covered with her skirt." To leave unburied the dead, even of enemies on the battle-field, was considered dishonouring to the victors. Coming to the present times, our cemeteries are generally made attractive as recreation grounds, and as such constitute a great boon to the dwellers in large towns and cities. But only so if burial be what it ought to be—the restoration of the body to the earth whence it came, and the total abolition of all entombment in strong coffins, vaults, catacombs or walled graves. The truth is that Sir Henry Thompson and Mr. Seymour Haden are each of them, both personally and as the respective representatives of cremation and burial reform, very much in advance of the time. It is certainly better to be so than to be behind the time, but the former has the disadvantage of causing a distrust in the minds of those many persons who dislike violent changes from the old beaten track. Still both may take courage. Many persons of light and leading have expressed during life a wish that after death their bodies should be cremated, and this has been done, the number of cremations showing an annual increase, but still forming a very small proportion of the total number of deaths. On the other hand, burial reform advances slowly, but let us hope surely. The body of the late Lord Sherbrooke was buried in one of the perishable coffins of the kind variously termed "hardened" or "compressed" pulp, "earth to earth," or papier mâché. We have been informed (though we do not know if our information be correct) that the patent for these has lapsed and that they may be procured at a much lower cost. We hope that undertakers will also show themselves abreast of the times if not in advance of them, and afford the public every facility for burying their dead in these perishable coffins, leaving wood to be utilised by the living, it being useful to them and unsuitable for burial purposes. As has been previously suggested in these columns, burial and cremation may well be tried side by side for the present; their various advantages and drawbacks may be carefully studied, and a decision as to which is the better mode of disposal of the body may be given after a sufficient interval has elapsed. We see that his Holiness the Pope is about to publish an encyclical prohibiting to the faithful "that manner of burial which consists in burning the body." But there are many foreigners and others in this country to whom cremation is a matter of religion and sentiment as much as burial is to others. And as Englishmen have reasonable facilities afforded them in foreign countries for the burial of their dead, it is only right that we should afford the same facilities for the disposal of the body by burning to those who prefer it to burial. Everything in connexion with this subject points to the importance of simplicity in the matter of burial if the latter is to continue as the more general mode of disposal of the dead in this country. Medical practitioners know better than any other persons what occurs after death, and how important it is that the body should be really and truly buried out of sight. To pamper the body during life is foolish, but to attempt to preserve it after death deserves a much stronger expression. Why is it that the body should be so offensive after death? Surely to remind us of our mortality and to induce us to act rationally.

IMPROVED FACILITIES FOR CONTINENTAL TRAVELLING.

THE HARWICH ROUTE.

BELGIUM, Holland, the Rhine, Northern Germany and even Russia attract tourists, holiday folks and the invalid in search of health. Though the majority travel southwards to France, the Riviera, Spain, Italy, the Mediterranean and the East, still—and especially in the summer months—there are thousands who prefer or who select as a change more northern latitudes. Thus it is that the Harwich route has yearly become more and more frequented. The accommodation afforded to passengers is therefore a matter of public interest. This fact is eloquently set forth by the figures we have obtained concerning the increased traffic. The number of passengers conveyed by the Harwich route between that port, Antwerp and Rotterdam amounted to 50,582 in 1882, 53,803 in 1883, 55,590 in 1884, 68,807 in 1885, 68,111 in 1886, 70,400 in 1887, 75,723 in 1888, 79,421 in 1889, 84,740 in 1890 and 85,189 in 1891. Thus, in the

course of the last ten years, 692,366 persons have travelled by this route and the traffic has increased at the rate of more than one-third in the decade. This is but a just reward of the intelligent care taken of the comfort and safety of the passengers. A great deal had to be done to render this route attractive, for there is the insurmountable disadvantage of a long sea journey. Most persons prefer a somewhat longer journey by land if this ensures a much shorter sea passage. By Calais the passage can be effected in an hour and ten minutes, by Dover and Ostend in less than four hours, whereas the sea journey from Harwich to Antwerp takes at least seven hours. But the Great Eastern Railway Company has sought to overcome this disadvantage by supplying larger steamers and charging much cheaper rates. The journey by first class throughout, from London to Antwerp or Rotterdam, costs only £1 6s., and there is a service every day except Sundays. The train leaves Liverpool-street at 8 P.M. and reaches Parkeston Quay at 9.50 P.M. The time occupied in putting the luggage on board and the journey down the Stour, permit an opportunity for supper before reaching the open sea. Unlike the channel service, there is no difficulty about the insufficiency of water. Ships of any size may be employed, and thus can be used twin-screw steamers taking fifteen feet of water, whereas the screw steamer *Seine*, built for the Dieppe and Newhaven line, must not take more than nine feet of water and therefore cannot be steady at sea. From the very first, the company were able to build large and powerful vessels for the Harwich route. Their smallest ship, the *Peterboro'*, is 822 tons, and there are four paddle steamers varying in tonnage from 922 to 1049 tons. These are, however, the elder ships of the fleet; comfortable and well appointed, but not to be compared with the new twin-screw steamships, the *Norwich* and the *Ipswich*, of 1036 tons each, and the *Cambridge* and the *Colchester* of 1159 tons each. These latter mentioned ships are fitted up like Atlantic steamers. The first-class cabins are in the central portion of the ship, where the motion is least felt and where the vibration caused by the engines is not so considerable. The sailors' quarters are fore and the second class aft. There is an upper promenade deck and a few deck cabins, and there are smoking, dining and ladies' saloons. In fact, there is a sense of space and roominess which tends greatly to mitigate the terrors of a sea journey. A sense of security and comfort is engendered, and the timid traveller feels that in so big and splendid a ship he need not fear the waves and the sea. Then there are numerous small cabins containing two to four berths each, where comfortable bedding invites repose. There is time enough—the journey is long enough—to make it worth while to undress, and thus the passengers may sleep through the worst part of the voyage.

A natural dread is felt of an overcrowded and badly ventilated cabin, especially during a rough night; but the first-class sleeping cabins cannot be overcrowded and care has been taken to supply good ventilation. The ship is lighted throughout by electricity and every cabin has its own light, which can be switched on or off as each passenger may desire. Thus the lighting does not increase the heat of the cabins. Then in various parts of the ceiling above the berths there are apertures which communicate with a shaft abutting in the engine room. Here a part of the steam power is employed to set in motion a fan placed inside this exhaust shaft. By this means a powerful current is artificially produced which draws off the foul air from the cabins. The ventilation is therefore effected independently of temperature or weather. This is most important, for all systems of ventilation that depend on variations of temperature are unreliable and uneven in their results. No special measures are taken to provide air inlets, but these exist nevertheless; apart from the fact that fresh air can always come down the gangway there are what is known as goose-neck ventilators. These consist of metallic pipes three inches in diameter which descend from the sides of the deck into the cabins. The pipe, when it reaches the deck, is bent over like a goose's neck, with its mouth downwards, so that the water cannot enter the pipe. The air, however, easily travels round the curve and descends into the cabins below. These goose-neck ventilators serve either for outlet or for inlet. When the exhaust fan is not working they probably act as outlets, but when the engines are in motion and the fan revolves then they would become inlets, especially if the gangway was closed. To this arrangement we would suggest an easily effected improvement, which could at least be applied to the new steamer now in course of construction, and which, it is claimed, will be larger and faster than any now on the line. We would urge that some at least of these goose-neck ventilators should be prolonged to the floor of the cabins. At present both inlet and outlet ventilators are all in the ceiling of the cabins. Air travels in a straight line from inlet to outlet. It does, by suction, draw away some of the air that is outside of the direct line of current; but we know full well that whereas the draught from an open door to an open window may be very strong, there are corners of the room that remain untouched. Thus, in these ships, the upper berths receive an unfair share of the ventilation. Of course the heat of the foul air makes it rise, and it thus gets caught up in the current. But we should like to see this current as active on the floor as on the ceiling of the cabins, and this result could be secured by prolonging some of the goose-neck ventilators to the level of the floor.

There is another point which we were not able to investigate, as the weather was too warm—namely, the heating of the cabins. This is secured by hot coils which are charged with steam. The question arises whether the inlets ought not to open near these hot coils, so that something of the sharpness of the cold wintry air may be mitigated. In winter more especially is the problem of ventilation most difficult. But it is encouraging to find that the subject has received considerable attention at the hands of the Great Eastern Railway Company; and though there may still be room for some improvement, we heard on all sides expressions of satisfaction at the airiness and coolness of the cabins. On the other hand, we noted with much regret that the air shaft communicating with the mechanical exhaust fan was not introduced in the second-class cabins. We would earnestly urge that in such a question no difference ought to be made between first and second class passengers. On the contrary, as the second-class cabins, if every berth was occupied, would be very crowded, greater care and greater energy in ventilating is necessary. The cost of prolonging the exhaust shaft from the ventilating fan to the second-class cabins would not be very great, and in any case, if this mechanical means of ventilation cannot be provided at both ends of the ship, then the preference should be given to the second class, where it is much more needed. We should say exactly the same thing of a Transatlantic steamer, where we maintain that the ventilation of the steerage is much more necessary and important than that of the saloons. We feel convinced that a company which has so lavishly provided for the comfort of its passengers and has spared no outlay to secure the latest improvements in the building of its ships, will take this criticism in good part, and will understand that, as the champions of public health, we can neither tolerate nor make any difference in classes of people or of passengers. All have equal need and an equal right to breathe as much pure air as it is practical to procure.

To return to the voyage. It has been seen that the passenger can enjoy a quiet supper before reaching the open sea; then a comfortable berth in a well-aired cabin affords him the means of repose and sleep while crossing the sea. This—for the distance to the mouth of the Scheldt is a journey of 90 miles—is performed in favourable weather in seven hours. For Rotterdam, the mouth of the Maas is reached in eight hours, the distance being 101 miles. This is a long journey as compared with the crossing of the Channel; but, on the other hand, those small, choppy waves which are so difficult to endure in the Channel are avoided. The ships being so much larger the motion is not so readily felt, and in any case it is slower, less jerky and irregular, and there are not a few persons who, though bad sailors, prefer a longer journey when the ship is larger and the motion easier to endure. On reaching the mouth of the Maas or of the Scheldt there is a long pleasant journey up these rivers. There the water is perfectly smooth; the passenger has some four hours before him to recover from any indisposition he may have experienced; then he can dress without hurry, wash at the excellent lavatories provided, and, refreshed and rested, he can take his breakfast at ease. Thus, when he finally lands at Antwerp or Rotterdam, he is not exhausted, but on the contrary, quite ready for a good day's business or pleasure. For the return journey the steamers by leaving Antwerp at 5.45 P.M. and Rotterdam at 6.15 P.M. are so timed that meals are taken in smooth water, and most of the passengers are in bed before the ship is on the sea. At Parkeston Quay next morning there are very comfortable and well-appointed lavatories, waiting-rooms and a restaurant, so that passengers can breakfast on land before the London and provincial trains leave. The boats

themselves go out in all weathers. Delays are only occasioned by exceptionally thick fogs.

To conclude, the Harwich route may be recommended for its comfort and cheapness. The ships are so large and well appointed that this to a considerable extent compensates for the greater length of the sea journey; and finally, if the traveller is overtaken by a storm or a gale, there is the company's hotel on the quay, where for a moderate cost he can wait for better weather.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6190 births and 3511 deaths were registered during the week ending Aug. 20th. The annual rate of mortality in these towns, which had increased from 17·3 to 18·0 per 1000 in the preceding three weeks, was again 18·0 per 1000 during last week. In London the rate was 17·2 per 1000, while in the thirty-two provincial towns it averaged 18·5 per 1000. The lowest rates in these towns were 11·6 in Nottingham, 12·0 in Hull, 12·3 in Croydon and 12·9 in Gateshead; the highest rates were 21·9 in West Ham, 22·1 in Sheffield, 23·2 in Liverpool, 26·2 in Salford and 28·2 in Preston. The 3511 deaths included 680 which were referred to the principal zymotic diseases, against numbers increasing from 585 to 681 in the preceding three weeks; of these, 386 resulted from diarrhœa, 93 from measles, 62 from scarlet fever, 55 from whooping-cough, 49 from diphtheria, 34 from "fever" (principally enteric) and one from small-pox. No fatal case of any of these diseases was recorded last week in Newcastle-upon-Tyne; in the other towns they caused the lowest rates in Halifax, Swansea, Derby and Huddersfield, and the highest rates in Preston, West Ham, Salford and Sheffield. Measles caused the highest proportional fatality in Sheffield, Brighton, Salford, West Ham and Oldham; scarlet fever in Preston; whooping-cough in Portsmouth, Bradford, Burnley and Preston; "fever" in Preston; and diarrhœa in Brighton, Leicester, Bolton, Leeds, Portsmouth and Cardiff. The 49 deaths from diphtheria included 37 in London. 3 in Manchester and 2 in Salford. One fatal case of small-pox was recorded in Plymouth, but not one in any other of the 33 large towns. Nine cases of this disease were under treatment in the Metropolitan Asylum Hospitals and 4 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3052, against numbers increasing from 1226 to 3088 on the preceding twenty-one Saturdays; 367 new cases were admitted during the week, against 346 and 376 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 143 and 174 in the preceding two weeks, fell to 139 last week, and were 43 below the corrected average. The causes of 85, or 2·4 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Nottingham, Portsmouth and Hull, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Gateshead, Birmingham, Leicester and Brighton.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·5 and 17·0 per 1000 in the preceding two weeks, rose to 17·2 per 1000 during the week ending Aug. 20th, and was 0·8 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·4 in Leith and 13·2 in Greenock to 22·3 in Perth and 23·0 in Paisley. The 480 deaths in these towns included 27 which were referred to diarrhœa, 15 to measles, 14 to scarlet fever, 11 to whooping-cough, 7 to diphtheria and 7 to "fever." In all, 81 deaths resulted from these principal zymotic diseases, against 83 and 93 in the preceding two weeks. These 81 deaths were equal to an annual rate of 2·9 per 1000, which was 0·6 per 1000 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 31 and 32 in the preceding two weeks, declined last week to 27, of which 16 occurred in Glasgow, 3 in Dundee and 3 in Paisley. The deaths referred to measles, which had been 23 and 19 in the previous two weeks, fell last week to 15, and 11 of these occurred in Glasgow and the other 4 in Edinburgh. The 14 deaths from scarlet fever showed an increase of one upon the number in the previous week, and included 12 in Glasgow and 2 in Edinburgh. The deaths from whooping-cough, which had been 11 and 16 in the preceding two weeks, declined again to 11 last week, and included 6 in Glasgow. The deaths from diphtheria, which had been 7 and 6 in the previous two weeks, were again 7 last week, and included 4 in Glasgow and 2 in Aberdeen. The deaths referred to diseases of the respiratory organs, which had been 77 and 74 in the preceding two weeks, rose last week to 76, and exceeded by 13 the number in the corresponding week of last year. The causes of 51, or nearly 11 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·5 and 21· per 1000 in the preceding two weeks, declined to 19·5 during the week ending Aug. 20th. During the first seven weeks of the current quarter the death-rate in the city averaged 22·4 per 1000, against 17·8 in London and 16·2 in Edinburgh. The 131 deaths in Dublin during the week under notice showed a decline of 14 from the number in the preceding week, and included 12 which were referred to diarrhœa, 3 to measles, 2 to "fever" and one each to scarlet fever, diphtheria and whooping-cough, and not one to small-pox. In all, 20 deaths resulted from these principal zymotic diseases, equal to an annual rate of 3·0 per 1000, the zymotic death-rate during the same period being 3·4 in London and 1·8 in Edinburgh. The fatal cases of diarrhœa, which had been 5 and 6 in the preceding two weeks, rose to 12 last week. The deaths from measles, which had been 6 and 5 in the preceding two weeks, declined to 3 last week. The 131 deaths in Dublin last week included 23 of infants under one year of age and 24 of persons aged over sixty years; the deaths of infants showed a decrease of 6 and those of aged persons a decrease of 8 from the numbers in the previous week. Six inquests were held and 6 deaths from violence were registered; and 47, or nearly 36 per cent., of the deaths occurred in public institutions. The causes of 7, or rather more than 5 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF CALCUTTA.

According to the weekly return, ending Saturday, July 23rd last, published by Dr. W. J. Simpson, the health officer of Calcutta, the total number of deaths registered in that city during the week was 181, against 207 and 193 in the preceding two weeks, and higher than the corresponding week of last year by 34. There were 5 deaths from cholera, against 23 and 19 for the preceding two weeks; the number is lower than the average of the past quinquennium by 6. No deaths occurred from small-pox, but there were 12 from tetanus, and the mortality from fevers and bowel complaints amounted to 65 and 23 respectively. The general death-rate of the week was 20·2 per 1000, which is the mean of the last five years. In the amalgamated area of suburbs the total number of deaths registered during the week was 121, higher than the corresponding week of last year by 14. There were 11 deaths from cholera, against 20 and 12 in the preceding two weeks; the number is higher than the average of the past three years by 6. No deaths occurred from small-pox, but there were 9 from tetanus, and the mortality from fevers and bowel complaints amounted to 47 and 24 respectively. The general death-rate of the week was 29·3 per 1000 per annum, against 28·1, the mean of the last three years. The general death-rate of the combined area is equal to 23·1.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR-GENERAL ROBERT WYATT MEADOWS is placed on retired pay; Surgeon-Colonel Robert Lewer to be Surgeon-Major-General, vice R. W. Meadows; Surgeon-Colonel Charles H. Y. Godwin, from the Seconded List (having resigned his post of Professor of Clinical and Military

Surgery at the Army Medical School, Netley), to be Surgeon-Colonel, vice R. Lewer (all dated Aug. 10th, 1892).

MOVEMENTS OF THE MEDICAL STAFF.

Surgeon-Captain Russell has been struck off the strength of the Cambridge Hospital, Aldershot. Surgeon-Captain Dixon is attached for temporary duty to the N.W. district. Surgeon-Captain Blackwell has rejoined at Woolwich from leave of absence. Surgeon-Captain Harris proceeds from Station Hospital, Devonport, to Okehampton for duty. Surgeon-Captains Reid and Duncan have returned to the Royal Victoria Hospital, Netley, from leave. Surgeon-Captain Begbie proceeds from Station Hospital, Portsmouth, to Aldershot, for a course of instruction. Brigade-Surgeon Gillespie, R.P., has assumed charge of the Station Hospital, Hamilton. Surgeon-Captain Daly has proceeded to the Curragh from Dublin for duty. Surgeon-Captain Burrows has proceeded to Cork from Longford for duty. Surgeon-Captain Browning proceeds from Templemore to Limerick for duty. Surgeon-Major Peyton has assumed charge of the Station Hospital, Enniskillen, from leave of absence.

The following is the list of successful candidates for commissions in the Medical Staff of Her Majesty's Army at the recent examination in London :—

	Marks.		Marks.
Pollock, C. E.	2815	Farmer, J. H.	2365
Mangan, F. M. ..	2470	Buswell, F. R. ..	2310
Rivers, J. H.	2470	Berryman, H. A. ..	2295
Taylor, W. J.	2450	Symons, F. A.	2285
Longhurst, B. W. ..	2385	Samman, C. J. ..	2235

INDIAN MEDICAL SERVICE.

The following is the list of the candidates for Her Majesty's Indian Medical Service who were successful at the Competitive Examination held at Burlington House on Aug. 8th and following days (29 candidates competed for 17 appointments, of whom 21 were reported qualified) :—

	Marks.		Marks.
Drake-Brockman, V. G.	2850	Langston, T. A. O. ..	2490
Milne, C.	2745	Ogilvie, W. H.	2490
Prail, C. B.	2720	Heard, R.	2405
Hunter, G. Y. C. ..	2640	Bourke, J. J.	2385
Young, W.	2620	Bidie, G.	2305
Macleod, J. N. ..	2615	Orr, W. H.	2230
Chatterton, E. R. ..	2600	More, P. St. C. ..	2210
Williams, C. E. ..	2580	Parry, E. R.	2195
		Morton, J. P.	2185

Surgeon-Major T. F. MacNeece has been appointed to perform the Medical duties of the Lawrence School and Civil Establishment, Mount Abu, from June 2nd, 1892. Surgeon-Lieutenant-Colonel E. Mulvany, Civil Surgeon, Muzaffarnagar, has been permitted by the Secretary of State for India to retire from the service subject to Her Majesty's approval. Surgeon-Major C. H. Bennett has been appointed to be Civil Surgeon of Tounghoo in addition to his military duties, vice Surgeon-Captain T. W. Stewart. Surgeon-Captain J. J. Pratt, Civil Surgeon, Gonda, has been transferred to the Civil Medical Charge of Fyzabad during the absence on leave of Surgeon-Major W. H. Cadge. Surgeon-Colonel J. Richardson, M.B., Inspector-General of Civil Hospitals, N. W. P. and Oudh, has been appointed to officiate as Surgeon-General and Sanitary Commissioner with the Government of India during the absence on privilege leave of Surgeon-Major-General W. R. Rice.

THE DISTINGUISHED SERVICE PENSION.

As we have already announced, a Distinguished Service Reward of £100 per annum held by the late Surgeon-General Hassard, C.B., has been conferred upon Surgeon-Major-General Reade, C.B. This officer joined the Army in March, 1854, served in the 2nd Battalion Rifle Brigade in the Eastern campaign of 1854–55, was present at the battles of Alma and Inkermann and siege of Sebastopol, and was wounded in November, 1855, at the explosion of the French siege train (medal with clasp and Turkish medal); he served with the battalion throughout the Indian Mutiny, and during the actions at Cawnpore, the capture of Lucknow, and the Oude campaign (medal with clasp).

The Secretary of State has notified that good-service pensions which may hereafter be conferred upon officers appointed to the Staff Corps after July 1st, 1891, shall be relinquished on retirement. The same rule applies to medical officers.

THE PROFESSORSHIP OF MILITARY SURGERY AT NETLEY.

We understand that Surgeon-Lieutenant-Colonel W. F. Stevenson, Army Medical Staff, is to succeed to the Professorship of Military Surgery, rendered vacant by the resignation of Surgeon-Colonel Godwin.

HOSPITAL BUILDINGS.

In future the opinions of the Surgeon-General and the Sanitary Commissioner, Madras, are to be obtained by the Sanitary Engineer before he approves of any estimates for hospital buildings submitted to him.

THE CHOLERA.

The Government of India have recommended that Dr. Cunningham, Professor of Physiology in the Medical College, Calcutta, should be given two years more in which to complete his scientific observations on the subject of the origin of cholera.

VOLUNTEER CORPS.

Artillery : Surgeon-Major W. Hunter to be Surgeon-Lieutenant-Colonel (dated Aug. 20th, 1892).

THE REPORT OF THE ARMY VETERINARY DEPARTMENT FOR 1892.

Owing to the influenza epidemic, which seems to have attacked the horses rather seriously at home, but not in India, the average sickness was increased, but the proportion of deaths remained the same as in the previous year, 2·04. The average age of horses now serving is eight years and eight months. There are 426 horses of sixteen years and upwards. The Army Vaccine Institute appears to be doing good work. Since the opening of the institute in January, 1889, lymph has been prepared for no less than 121,044 people.

NAVAL MEDICAL SERVICE.

The following appointments have been made :—Fleet Surgeon John Tyndall to the *Crocodile* and Staff Surgeon John A. M'Adam to the *Camperdown* (both dated Aug. 22nd, 1892). Surgeons : Harold F. D. Stephens, M.B., to the *Camperdown*, Frederick W. Stericker, M.B., B.A., to the *Mistletoe*, and William J. Colborne to Haslar Hospital (all dated Aug. 22nd, 1892). Surgeon and Agent : David J Lawson, M.D., at Portland (dated Aug. 24th, 1892).

MILITARY MANŒUVRES AND THE HEAT.

We have been more fortunate in this country with our autumn military manœuvres than our continental neighbours. The recent hot weather with them has been characterised by temperatures of a tropical kind and attended with a great many fatal results, an almost unprecedented amount of sunstroke and sudden attacks of heat exhaustion. From Trieste we learn that the troops manœuvring in the Karst hills, near Senosece, Camiola, have suffered greatly, no less than 200 cases of sunstroke having occurred among the men, with eleven deaths. From Vienna reports continue to be received of the almost unbearable heat that has prevailed and of the suffering of the troops in consequence. It is computed that at least one-third of the force composing the 71st Brigade recently engaged in an evolutionary march at Agram fell out of the ranks overcome by the heat. The officers suffered equally with the men, and one at least died on the roadside. The total number of deaths directly attributable to it amounted to 14. From France we learn that so many soldiers have been overcome by the heat, owing to marches not having been countermanded, that M. de Freycinet has issued a circular calling for reports on all such cases, so as to fix the responsibility on those who are to blame for their culpable want of foresight. The foregoing may be taken as samples merely of what the heat has been and of its disastrous effects on military forces marching or manœuvring; and reports from various other sources are all to a similar effect. Letters that have reached us from English people travelling in Germany speak of the heat as intolerable. As far as this country and our own army is concerned we have been, as we have said, far more fortunate. The heat has no doubt been great, but not at all comparable with what it has been elsewhere. On the 22nd inst. the brigade of Foot Guards, with a detachment of the Army Service Corps, marched by stages from Ash to Chobham after the Aldershot manœuvres—a distance of ten miles—and thence by Hounslow Heath to London. The Plymouth flying column marched from Okehampton on Dartmoor and reached Roborough, undertaking some manœuvres *en route*, which together may be reckoned as equal to twenty miles, and did it well. On the 20th inst. three officers of the King's Own Scottish Borderers, fully equipped, marched forty miles from Okehampton in sixteen hours, a good evidence of their training and physical form.

CASUALTIES AMONG BRITISH SOLDIERS IN THE BOMBAY COMMAND.

In consequence of reports that had appeared as to the alleged excessive mortality amongst the drafts sent out to join British corps in India, Sir George Greaves, the Commander-in-Chief, Bombay, recently called upon the principal medical officer of that Presidency to furnish him with a detailed statement upon the subject, which Surgeon-General Webb has accordingly done. It appears that our contemporary, the *Pioneer*, in May last called attention to the subject in commenting upon the report of the Inspector-General of Recruiting. It will be remembered also that a question was put to Mr. Stanhope in the House of Commons regarding a part of the evidence of the late Commander-in-Chief at Bombay before Lord Wantage's Committee, and that the then War Minister stated his grounds for considering that the Duke of Connaught's impressions had been founded upon incorrect data. The report of the Principal Medical Officer, Bombay, goes very fully into the subject, and a Government resolution has been issued upon it to the effect that the complaints of excessive mortality and invaliding among young soldiers do not, at any rate, apply to British regiments quartered in the Bombay Presidency in the years 1889, 1890 and 1891. Still, anyone carefully reading the report itself will arrive at the conclusion that if the facts and figures fail to justify or substantiate the statements as to the excessive waste of young soldiers by death and invaliding as regards the Bombay command, they nevertheless do show that in proportion to their strength the rates of mortality are higher in soldiers young in years and Indian service than in other classes; and it would be very strange were it otherwise, considering that, for one thing, they have all to undergo the change from a temperate to a hot climate of which, and of all that this implies, they have had no previous experience. As to the loss among young soldiers from invaliding, the rates among them are not as high as in those of medium age; the inefficiency from sickness is probably greater; the total waste from death and invaliding is about the same at all ages up to twenty-five years and lessens considerably after that. It is—as we have said repeatedly, and as has, we think, been proved by experience—the soldier's liability to suffer from enteric fever and climatic diseases during the first and second years of his service in India that is the difficulty that has to be overcome. How is that to be effected? That is the point for Anglo-Indian sanitarians to take up. The first year of Indian service is the trying one for soldiers and it is then that the greatest care has to be taken in regard to them. After five years' service in India the climate begins again to tell on the constitution and the death-rate increases, and it and the invaliding-rate go on increasing. It is not, perhaps, so much that the soldier is young when he lands in India, according to all the statistical data furnished from that country, as that he must serve a year or two before his increased susceptibility to typhoid fever is surmounted,

THE RELATIVE FREQUENCY OF ABSCESS OF THE LIVER AMONG EUROPEAN AND NATIVE TROOPS IN INDIA.

On comparing the statistics of the native with those of the European army for the year 1890 it will be found, according to the Report of the Sanitary Commissioner with the Government of India, that the death-ratio of Europeans from hepatic abscess was about thirty-five times higher than that of the natives of India, it having been twenty-five times higher in the two preceding years. Hepatic abscess contributed 7·6 per cent. of all the deaths of European soldiers and only 0·2 per cent. of the deaths of native soldiers.

DYSENTERY AMONG EUROPEAN AND NATIVE TROOPS IN INDIA.

The highest admission rates for dysentery in India during 1890 were those of Burma, Quetta and Bengal Proper and Assam; the highest death-rates were those of Burma, Bengal Proper and Assam and Quetta. The death-rate of native troops from dysentery was to that of Europeans as 1·5 : 1; dysentery caused 7 per cent. of all the deaths of native soldiers, whereas it only caused 5 per cent. of the deaths of European soldiers, and this difference was the same as in the preceding year.

THE MESSING OF THE SOLDIER.

We would call attention to a pamphlet, which may be obtained at the cost of sixpence, on the messing of the soldier, including schedules illustrative of the new system of military cooking, issued by direction of Lieut.-General Sir Evelyn Wood, V.C., G.C.B., commanding the Aldershot Division. It contains information as to the best and most economical cooking and disposal of the soldier's rations and groceries, revised up to the date of the present month, likely to prove useful to medical officers and others whom it may concern.

Correspondence.

"Audi alteram partem."

"THE LANCET COMMISSION ON SANITATION IN RELATION TO THE LAW AND PRACTICE OF HOUSE-LETTING."

To the Editors of THE LANCET.

SIRS,—I notice an article in *The Times* of Saturday referring to an inquiry made by you and as to the granting of certificates by the sanitary inspector of a town after a thorough examination of the premises, specially mentioning the town of Eastbourne. I beg to inform you we have issued these certificates for some time past, and they have been largely applied for by the inhabitants. They are only granted after a most searching examination by our inspector. I should be glad to send you a copy of the certificate should you care to see one.—I am, Sirs, yours, faithfully,

S. PENFORD,
Mayor of Folkestone.

Folkestone, Aug. 22nd, 1892.

To the Editors of THE LANCET.

SIRS,—Your report on sanitation in relation to the law and practice of house-letting is instructive and interesting reading. Dr. Farquharson's Sanitary Registration of Buildings Bill, introduced into the late Parliament, has evidently not been without effect, as from your report it appears that in part its proposals have been adopted by the sanitary authority at Eastbourne. Dr. Farquharson's Bill, to quote the leading article of *The Times* on the occasion of its second introduction (Feb. 23rd, 1887) proposed "to impose compulsory sanitary inspection and registration upon every building intended to to used as a school, college, hospital, asylum, hotel, or lodging-house, and to give opportunities for voluntary inspection and registration in the case of all other buildings whatever." Interesting as the report from Eastbourne is it is too general to be accepted as conclusive, and I would venture to suggest that the authorities at Eastbourne might with advantage contribute to your columns some statistics illustrating the extent to which the sanitary registration of buildings has been carried out by them.

The total number of houses in Eastbourne should be given and the number registered as in a satisfactory sanitary condition, together with some indication of the standard of excellence insisted on before certificates are given. Whether the services of public officers are given gratuitously and, if so, whether to the extent of advising upon the necessary work to secure the certificates.

I am, Sirs, yours faithfully,

EDWARD T. BLAKE, M.D., M.R.C.S.,
Life Assoc., Sanitary Institute, Great Britain; Corresp. Memb., Amer. Inst.; Memb. of French Hygienic Soc.; &c.

Berkeley Mansions, Aug. 24th, 1892.

"ON ACTINOMYCOSIS OF THE FOOT, COMMONLY KNOWN AS MADURA FOOT."

To the Editors of THE LANCET.

SIRS,—On returning from my holiday my attention was drawn to Mr. Kanthack's letter criticising my paper under the above title, which appeared in THE LANCET of July 2nd, 1892. Mr. Kanthack says he "found it necessary to defend himself from a criticism based on a mere report." I criticised Mr. Kanthack on one point only, and gave him all the credit I could. In the latter part of his letter Mr. Kanthack seems to imply that the statements which I attributed to him were obtained elsewhere than from the printed reports of the meeting. Such is not the case, all those statements appeared in the reports of the meeting of the Pathological Society, published in THE LANCET and *British Medical Journal*. As

Mr. Kanthack allowed the reports to pass uncorrected I naturally concluded that they represented his views. Mr. Kanthack, however, need not make a misstatement. I did not assert that in "all" cases of actinomycosis bovis Gram's method, with or without preliminary treatment, gives brilliant results. The word "all" does not appear in my paper in this context. For the great majority of cases my statement is true. It is a fact that a few specialists have for some time recognised the identity of actinomycosis bovis and actinomycosis hominis, but it is only within the last three or four years that this identity has been "fully" and "generally" recognised. As late as 1887 Israel himself and Koch failed to identify Dr. Acland's case as one of actinomycosis.[1] Mr. Kanthack asserts 'as far as my experience goes—and this is the usual experience—in cattle the clubs are absent as frequently as in man." The clubs are generally, and probably at one stage or another always, present in both actinomycosis hominis and actinomycosis bovis; in the former they are not usually stained by Gram's method, in the latter they are almost invariably deeply stained.

Mr. Kanthack next makes the extraordinary assertion that "in actinomycosis, whether in man or in cattle, the central mycelial zone, the true and typical fungus elements always stain with Gram's method, but *the hyaline clubs never do*; in fact, they refuse any nuclear stain." This is the rule with regard to actinomycosis hominis, but in actinomycosis bovis the clubs generally stain deeply with Gram's method,[2] while the bovine cases in which a central mycelial zone is stained are even now so rare as to be worthy of being recorded when they occur. Mr. Kanthack says "it is now acknowledged by all competent mycologists that the hyaline rays are of no morphological or biological importance, and are probably due to some degenerative changes." Some competent mycologists undoubtedly hold this view, but others, equally competent, consider that the club-shaped bodies may be important structures, and play a part in the development or reproduction of the organism. With regard to Mr. Kanthack's statement that "the extraordinary differences in the staining reactions of the human form from those of the bovine are certainly new and require confirmation," I may say that attention was drawn to them by Dr. Acland and Professor Crookshank five years ago, and I regret that, as is evidently the case, Mr. Kanthack should have written on actinomycosis without having studied Professor Crookshank's exhaustive reports on this subject. Mr. Kanthack next quotes me unfairly. I quite agree with him that in madura disease the clubs are "gigantic," and they were so in my specimen. What I said, or certainly implied, in my paper was that the clubs did not stain with Gram's method, and hence were apparently absent. A line or two further on I distinctly stated that the clubs were present.

I take this opportunity of correcting an error which appears in my paper. The reference to Baumgarten (ref. 4) should be Baumgarten's Jahresber. ü. Path. Mikroorg. iv., 1888, p. 300, note.

I fear I have already occupied much space, and I will therefore conclude by referring Mr. Kanthack to the historical and pathological researches on actinomycosis by Professor Crookshank published in the report to the Agricultural Department for 1888. This report is now about four years old; in it many of the points alluded to here are dealt with most fully.—I am, Sirs, yours faithfully,

King's College, Aug. 18th, 1892. R. T. HEWLETT.

DANUBE FEVER.

To the Editors of THE LANCET.

SIRS,—Dr. Oliver's paper in your issue of August 13th calling attention to the occasional admission into English hospitals of cases of Danube fever and febrile diseases allied thereto leads me to mention the case of a Russian sailor received into the Liverpool Fever Hospital last autumn. O. S——, aged twenty-five, sailed on the return voyage from Galatz to Rotterdam, the voyage occupying from sixteen to seventeen days, and of a crew of twenty-five hands thirteen suffered either before leaving the Danube river or at various times on the voyage from illness referred by them to the ailment locally known familiarly as "Danube fever." The crew were paid off at Rotterdam, several of them, including O. S——, being still ill. The latter was admitted ten days later into the Liverpool Fever Hospital, South. his case having been notified as one of enteric fever. Death ensued three days subsequently to admission, on Sept. 25th. Clinically, the case ran during the three to four days under observation at the hospital a course entirely distinct from typhoid fever: fever, remittent in type, presenting a diurnal range from the normal to 104°, on one occasion with rigor, and at time of death reaching 106°, was associated with symptoms pointing to uræmia, death resulting from coma. The urine contained blood in large proportion; the skin, bathed in profuse sweat, was of yellow tint, this deepening before death noticeably; pulse 80, full, regular, quickening towards the end to 120 and failing; twitching of face and hands, nystagmus with apparent paralysis of upper extremities, on day preceding death; stools loose and orange-yellow in colour, the patient lying inert and motionless, becoming unconscious on second day after admission. The principal points noted post mortem were extreme congestion of internal organs, splenic enlargement to weight of nineteen ounces, and inflammation of membranes of brain and heart, meningitis and endocarditis being present; no enteric lesion. The illness was attributed to drinking Danube water by the patient and other members of the crew, and ran, as far as I could gather from accounts obtainable, a somewhat relapsing course in the various cases, including that of my patient. The fatality in other cases could not be ascertained.

I am, Sirs, yours faithfully,

C. KNOX BOND,

Aug. 23rd, 1892. Medical Superintendent, Bradford Fever Hospital.

[1] Brit. Med. Jour. vol. ii., 1887, p. 97.

[2] Vide coloured plates in Professor Crookshank's Report to the Board of Agriculture on Actinomycosis.

"PROSECUTION FOR FALSE CERTIFICATE OF DEATH."

To the Editors of THE LANCET.

SIRS,—The brief account in THE LANCET of August 20th of the "false" death certificate given by me omits an important fact: and as the press has prominently reported the case with extraordinary distortion and scandalous imputations, I trust you will do me the justice to give my version of the affair. Thus—I learnt in the daily papers that I kept a dispensary and swindled the poor of their money and lives, though I conduct a middle-class practice at a private residence; that the patient had been visited twice by an unqualified man was given great importance to; that I had sent a registered practitioner to see the case and that he was quite willing to give the certificate was not mentioned. These are the facts: On July 25th a patient sent a message to my surgery requesting a visit. My unqualified assistant went. There were then no serious symptoms. He went again next day and found her much worse. He sent for me. I was engaged with a bad midwifery case and knew I could not leave for hours. I have a grave constitutional defect. I cannot be in two places at once; but I did the best I could under the circumstances. I sent a message to my collegue Mr. Herring of Sussex-road, N., to see the patient for me. He has been paid by me for going and was therefore my agent. He agreed with the diagnosis and treatment and has since written to the Registrar General to say he would have been quite willing to give a certificate. I arrived on the scene a few minutes after death and never saw the patient alive. I have been much blamed for not giving Mr. Herring's certificate to the friends. But I did not take the trouble, for the following reason. It is an actual fact that if language is taken in its ordinary sense, it is possible to truthfully fill up a death certificate as at present worded without having seen the patient till after death. This is an astonishing statement and has probably occurred to no one before. But it is beyond all dispute. I could in this case truthfully give the cause of death "to the best of my knowledge and belief." I could truthfully state when I had "last seen" him or her. But could I logically and truthfully say I had attended the deceased? A little reflection showed me I could. It is first necessary to understand the meaning of the word "attend," as used on a death certificate. Like many other words in the English language it has two meanings as different as night from day. In the phrases "attending an auction," "attending court," "attending a funeral" it means simply "going to" and nothing more. But there is overwhelming evidence that on a death certificate it means nothing of the kind. Medical attendance means "attending to" patients, it means treating them. I can attend patients at my own house. But could I truthfully and logically say I had treated a patient

whom I had never seen? A thousand parallel examples showed me I could. Would not an engineer naturally say that he had built a bridge, though he had done it entirely by proxy? And when he had said it, who would be so insane as to accuse him of lying? If a registrar's tailor met him in the street and asked him (the registrar) for some money because he had made him a suit of clothes, the registrar would carefully inquire whether the tailor had really made them himself. Finding he had neither seen nor touched the cloth, he would call him a wilful perverter of the truth and pass on. I could multiply these instances *ad infinitum*. Therefore if the statements just quoted can be truthfully made, I could truthfully say I had attended the deceased on the certificate for which I was fined. For the crime of using language in its ordinary sense I have had to pay nearly twenty pounds, and I was pelted with mud while my hands were tied. The real person to blame is the stupid individual who worded death certificate forms. They ought to read thus: "I certify that I *personally* attended to.....during h... last illness and that I last saw h... *alive*." There is no ambiguity about this. It was unfortunate for me that my solicitor did not point out to the magistrate the real meaning of "attend" as used by medical men. If he had done so, the summons must logically have been dismissed.

I am, Sirs, yours obediently,

Seven Sisters-road, Aug. 20th, 1892. STEPHEN SMITH, L.S.A.

*** We publish our correspondent's letter, although we certainly do not think that his arguments greatly amend his position.—ED. L.

"ANNUAL REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR 1890."

To the Editors of THE LANCET.

SIRS,—In reviewing the above report in your issue of Aug. 20th, you dwell at some length on the mortality and sickness caused by enteric fever among the British troops in India. That it is a subject of great importance to the army nobody can deny. Not only many lives are lost both among the men and officers, but the State also suffers a great pecuniary loss by the sickness and invaliding caused by it. With your permission I shall attempt to say a few words on the subject from the little experience I have had both among the British and native troops in India. You ask the question whether enteric fever is or is not prevalent among the native population in India? I have no hesitation in saying that natives of India do not suffer from it to the extent the Europeans do in India. There is no doubt that the enteric fever is essentially the same in pathology in India both among the Europeans and Indians, as the corresponding fever in Europe. If that is the case the question arises, How is it that it is not so prevalent among the latter as among the former? It is more puzzling when one thinks of the sanitary surroundings of both the classes. He must be a bold man who can put his finger on any sanitary defect anywhere to be found in the barracks of the British soldiers in India. As you rightly observe, there are no imperfect drains and sewer air to account for the cause of the disease. It cannot be put down to the water-supply, as not only is it good, but is nowhere better looked after than in the barracks in India. If that is the case where should we look for the cause? Is it due to milk? I think not. The admirable paper by Sir Charles A. Cameron in the Cavendish lecture on "Some Points in the Etiology of Typhoid Fever" seems to remove the difficulty on that point. He says: "I must deprecate the common practice of referring every case of disease to polluted water, defective sanitary accommodation, or leaking sewers. The fact is undoubted that an improved water-supply in Dublin has not been followed by a diminution of typhoid fever." The theory of Rondet and Roux appears more acceptable. If that theory is correct, there is no doubt that bacilli coli communis are in abundance in cantonment bazaars in India, which are not only frequently visited by the British soldiers, but at some stations they are in close proximity to the barracks. Granting that it is the case, the question again faces us, Why should Europeans suffer more than the natives? I think the activity of the lymphatic system in the former has a great deal to do with the conversion of the harmless bacillus into the virulent form of bacillus of Eberth.—I am, Sirs, yours truly,

Aug. 23rd. P. J. DAMANIA, D.P.H.

THE CHOLERA IN BELGIUM.

(FROM OUR SPECIAL CORRESPONDENT.)

Brussels, August 23rd.

ALL matters relating to public health in Belgium come under the jurisdiction of the Ministry of Agriculture and Commerce. Thither I went this morning to seek for information concerning the supposed outbreak of cholera in Belgium. I found that a Council had been hastily summoned. The Minister and other persons concerned were gathered together to discuss this question of cholera and to take measures. The consultation was of course held with closed doors, and I do not pretend to have penetrated Ministerial secrets. Nevertheless I can say this much that the strongest indignation was expressed against the attitude of the press. For the sake of publishing sensational news an alarm had been raised which was likely to gravely compromise the commercial relations of Belgium. Yet no one present was able to deny that deaths had occurred at Antwerp and at Jumet. The Government lays stress on the mussels which the sailors of the *St. Paul* had eaten; the press, on its side, insists rather on the fact that three out of the four sailors attacked died and that their symptoms were those of cholera. The Government complains that the press is more eager to give bad news than good news, and raises unnecessary alarm, which is likely to damage the trade of the country. To this each newspaper replies that if it abstains from giving the news other newspapers will be less scrupulous and that, therefore, secrecy is impossible. For my part I cannot help thinking that the press on one side and the Government on the other are both in the wrong, or indeed I might, with equal justice, say that they are both in the right. Certainly there is no cholera epidemic in Belgium as yet, but it is equally certain that the events of the last few days justify the fear as to the possibility of such an epidemic breaking out. The Government is quite right in saying that there is no immediate cause of alarm; the press has only done its duty in recording what has happened and in putting the public on its guard.

About a fortnight ago, in Brussels, an old woman of dissipated habits, a drunkard, was seized with violent cramps, vomiting, diarrhœa, and died. This woman was an inhabitant of Brussels. She had not been in contact with foreigners. There was no reason to believe that this was a case of imported cholera. Such cases occur every year without epidemics ensuing. Brussels has a very efficient sanitary administration. There is no need to alarm the public in Brussels so as to enforce sanitary measures which otherwise would not be accepted. Therefore the sanitary authority quietly took all the measures which would have been taken had this been a genuine case of Asiatic cholera and nothing was said about it. A fortnight has now elapsed and there has been no other such case in Brussels. But what has occurred at Jumet is altogether different. There are three great centres of population in Belgium—namely, the neighbourhoods of Brussels, Liège and Charleroi. The mining town of Jumet has a population of 24,000 inhabitants, while the historical town of Charleroi, which is some five miles distant, has only 21,000 inhabitants. Both towns may be considered healthy. The mortality at Jumet during the first quarter of this year was equal to 18·5 per 1000, and during the second quarter to 18·1. At Charleroi the mortality was, during the first quarter of this year, 18·5 per 1000, identically the same as at Jumet, and during the second quarter considerably less, namely, 15·3. It would seem therefore that the public health is fairly good, though the great majority of the population consists of coal miners, glass-blowers, metal workers and others who labour hard for their living, and often only obtain very meagre wages. During the great cholera epidemic of 1866 the mining population of Jumet suffered extensively, especially the inhabitants of the mining villages of Agasse and Quairelles and within the last fortnight or three weeks there have been a great number of cases of violent diarrhœa or cholerine in this district. On the Wednesday of last week a Belgian miner named Van Esbeeq, aged forty-two, felt somewhat indisposed. Though a native of Jumet, he had gone to Paris and was working in some brickfields near Paris. There he probably drank some of the contaminated Seine water. In any case he determined to go home and on reaching his house, at Jumet-

Gohyssart, he became much worse and died on the Friday, the symptoms being similar to those of cholera. A child two years old, named Henri Hayel, living in the next house died the next day, apparently from the same cause. Then another child was seized by the same complaint, and in all, I believe, nine cases occurred in rapid succession, though some of the victims lived at a distance of several hundred yards from the first case. To-day there have been, as yet, no new cases reported from Jumet, but it is stated that at the hospital of Charleroi there are three patients suffering from cholera nostras.

What gives exceptional gravity to the news from Jumet is the fact that the first case was that of a man who had just arrived from the suburbs of Paris, where we know there has been a considerable amount of genuine cholera. Then the sanitary conditions of a district like that of Jumet are apt to facilitate the spread of the disease. A correspondent, writing from the spot to the *Brussels Gazette*, relates that the inhabitants of the district of Jumet are particularly fond of fishing. In 1866, when an official inquiry was instituted in consequence of the prevalence of cholera, it was found that many miners kept in their houses dead animals so as to breed maggots, which they used as bait for fishing. Thus in a bedroom, where several persons slept together, a dead horse's head covered with maggots was found. The inhabitants failed to understand that there was any harm in sleeping side by side with the decomposing flesh of animals. In other cases it was ascertained that to avoid the trouble of going out in the yard at night the inhabitants went into their coal cellars, and thus a quantity of fæcal matter was mixed with the coal used for domestic purposes. How far the spread of education has improved the present generation still remains to be seen, but the recollection of these facts does not tend to inspire a sense of security.

The Sanitary Commission of the Hainault, which comprises the Charleroi and Jumet districts, has been convoked in hot haste. Eminent and well qualified hygienists and medical men belong to this Commission; but will they possess the legal powers to act as the emergency demands? The police, we are told, are distributing disinfectants gratuitously; but do the persons to whom they give these substances know how to use them?

While the cholera was thus menacing the populations some thirty miles south of Brussels, some twenty-seven miles north of that city, at Antwerp, the French steamer *St. Paul* arrived from Havre and began to unload at the west quay of the Kettendyck Dock, near to a steamer called the *St. Marc*, on which a boiler explosion recently occurred. The ship was undergoing repairs. On the 16th of this month one of the crew of the *St. Paul* was seized with violent cramps and conveyed to the Stayvenberg Hospital, where he died. On the 17th, Alexis Bian and Jean Collin, suffering in the same way, were also taken to the same hospital, and on the 20th they were followed by another member of their crew named Jean Rolland. Of these four men three are now dead. It is said that they ate a large quantity of mussels, and it is hoped that the mussels and not the cholera are the cause of their death. But two members of the crew of the *St. Marc*, which is anchored next to the *St. Paul*, had received slight burns from the boiler explosion, and they were undergoing treatment, also at the Stayvenberg Hospital. Whether it be the effects of fear and imagination or a mere coincidence or the effects of contagion, there is as yet no evidence to show, but one of these men, François Breydel, while undergoing treatment for his burns was seized with choleriform symptoms on the 18th inst. and died. To-day more significant news is to hand. The barge *Jeune Adèle* came to the Kettendyck dock, where the *St. Paul* is unloading. The wife of the skipper, Jeanne Van Keer, was seized with violent cramps, and her child, aged four years, suffered in the same manner. The woman was conveyed to the hospital and died on Sunday. No one says that this woman, or her child, or the sailor Francois Breydel from the ship *St. Marc* had eaten mussels; but both this ship and the barge were in the same dock and near to the *St. Paul*.

Nevertheless the Belgian Government blamed the Belgian press for causing mischievous alarm by publishing some of the above details. Undoubtedly it is wrong to unnecessarily alarm people and to pretend that there is a cholera epidemic in Belgium at the present moment as the state of public health, notably at Brussels, is exceptionally good in spite of the great heat. But, on the other hand, the press would be singularly remiss in its duties if, in the face of the above facts, it did not pronounce an energetic warning. The good that such warning does is illustrated this morning at the Sanitary Bureau of Brussels, where a great number of letters have been received from various householders who imagine that their drains are not in order. No such letters had been sent for a long while, and if they have come to-day in such numbers it is because the population is awaking to the necessity of taking proper precautions. This is just what should be done. The death-rate at Brussels for the week ending August 13th was 20 per 1000 and the sanitary condition of the town is good. The Sanitary Bureau, since its creation in 1874, has overhauled, altered and improved the drainage &c. of 11,000 to 12,000 houses out of the 18,000 houses which compose the town of Brussels. The result has shown itself in a very great reduction of mortality. Brussels is well prepared to face an epidemic. I only wish the same could be said of the neighbourhood of that city and of the rest of Belgium.

Our correspondent, writing on Wednesday, Aug. 24th, says:—The *Moniteur Belge*, the official gazette of the Belgian Government, publishes this morning a circular addressed by the Minister of Agriculture to all the governors &c. of the various provinces of the kingdom. The circular commences with the assertion that "epidemic cholera has not as yet manifested itself in any locality of the country, and the general sanitary condition remains excellent. But the extension of Asiatic cholera in certain foreign countries should excite the watchfulness of the public powers." Then follow very lengthy and revised instructions as to the measures and precautions which should be taken against cholera. It will be noted that the Government circular does not deny the existence of cases of cholera; it only maintains that "as yet" there is no epidemic. This is rigorously correct and confirms what I attempted yesterday to explain.

The *Patriot* of to-day publishes an interview with Dr. Masoin of Louvain, Professor at the University and member of the Belgian Academy of Medicine. Dr. Masoin states that he believes there have been cases of real cholera in Belgium, because the patients had come from France, where real cholera undoubtedly exists.

At Brussels Dr. Janssens, chief of the sanitary bureau, has summoned all the police who volunteered to act as a reserve force for the service of disinfection &c. These men have all been trained, and it is only necessary now to see that they have not forgotten any of the lessons given in the past and are still ready to act if necessity should arise for calling out these reserves. The town authorities are thus quite ready for any emergency, though the public health continues excellent.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Manchester Royal Infirmary.

THE trustees of the Royal Infirmary have decided that no extension on the present site of that building shall take place. The ballot papers, which were opened on last Monday week, showed a majority of 140 against the proposal of the board of management; but whether from a lack of interest on their part or from a feeling of their inability to decide so momentous a question, only a little over half of those authorised to vote recorded their voices. The consequence of this decision is that the infirmary will be carried on in the accustomed way. Whether or no another attempt will be made by the Owens College authorities to induce the infirmary board to build upon the college land remains to be seen. The consent of the infirmary to such a proposal would undoubtedly be the easiest relief from the difficulties of the college authorities, who, in case of an adverse decision, would probably themselves commence the building of a general hospital on their estate. The funds necessary for this purpose, together with an income sufficient to maintain the hospital would, however, first have to be provided and would no doubt take time to collect. In connexion with this it is worthy of note that the majority of memorialists by whose exertions the proposal of the infirmary board was the other day rejected disclaim any idea of working for the benefit of the college and have fought their battle solely upon the "open space," "value of surrounding property" platform. They profess to retain their approval of the infirmary in its present state and management; nevertheless, whatever their motives may be, their action has considerably strengthened the hands of the Council of the Owens College, and has very much weakened those of the infirmary board.

Manchester, Aug 24th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The British Medical Association Meeting at Newcastle, 1893.

A PRELIMINARY meeting to promote the objects of this meeting at Newcastle in 1893 was held last Thursday at the College of Medicine, Dr. Philipson, president-elect, in the chair.

Berwick.

A very successful bazaar has been held at Berwick to promote improvements at its suburb Spittal, including a sea-wall and a promenade on its splendid beach. Earl Percy opened the proceedings.

The Thompson Bequest to the Poor of Byker, Newcastle.

The ceremony of laying a wreath over the tomb of the late Mr. Thomas Thompson of Jesmond was duly observed last week at Jesmond Cemetery. A few years ago a Mr. Louis Thompson of Byker, Newcastle, left the handsome amount of £15,000 to the poor of Byker on condition that a wreath should be placed on his father's tomb annually by the guardians of the poor of the district; should the ceremony, however, be omitted for three years the amount is to be paid over to the national exchequer. The interest of this large sum has been duly paid to the Poor-law guardians of the district, and is a great relief to the rates.

Small-pox in the North of England.

A good deal of concern is expressed as to the continuance of small-pox in the north of England from Leeds to Stockton and Middlesbrough. At the last place there were fourteen cases in the hospital, twelve being from Middlesbrough and two from Stockton. So far Newcastle and the Tyneside continue clear; indeed, the general health of the district is excellent.

North-Eastern Convalescent Home.

The half-yearly meeting of the North-Eastern Friendly Societies' Convalescent Home at Grange-over-Sands was held last week at Sunderland, and the report was very satisfactory. After doing a very useful amount of work, there remains a balance in hand, so that this institution is a good example of the coöperative system applied to medical purposes. The Home was built for working men, being managed and supported by them.

Ambulance Work in the North.

Mr. Galbraith, surgeon, of Gosforth, near Newcastle, having delivered a course of ambulance lectures and given instructions to a class of thirty students during the session 1891–92, an examination took place by Dr. Mears with highly satisfactory results. Last week the students were presented with their medals and certificates, Mr. Galbraith receiving at the same time an address and presentation in appreciation of his services.

Death of Mr. John Currie Steele, L.F.P.S. Glas.

Mr. John Currie Steele, surgeon, of Willington Quay, died last week at the early age of forty-eight, much regretted. He was one of the first surgeons of the district to give systematic ambulance instruction to the numerous workmen of mid-Tyne, where his services were much appreciated, and he was the recipient of numerous public testimonials in recognition of his worth.

The Accident to Dr. Cook of Gateshead.

Further news of the late severe accident in Norway to Dr. Cook of Gateshead has been received in Newcastle. Mrs. Cook is now with her husband where he is laid up but doing well at a private hospital in Bergen. It appears that when the horse bolted the vehicle was overthrown by coming in contact with the wall of a bridge, below which, at a distance of forty feet, rolled a turbulent stream over granite boulders. Dr. Cook had his sternum fractured as well as several ribs. He first received attention from Mr. Taylor of Braintree, Essex, and Dr. Burton of Huddersfield. The Norwegian surgeons, Drs. Christie Sandberg and Middlefast, under whose care Dr. Cook is now, have been most kind and attentive. He will of course have to remain in Norway for some time, as the North Sea is no respecter of fractured sternum and ribs.

A beautiful stained glass window has been placed in Blyth Parish Church by Mr. Gilbert Ward of Blyth in memory of his son Dr. Henry Debord Ward.

Newcastle-on-Tyne, Aug. 23rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Queen's College, Cork: Annual Report.

DURING the session 1891-2 the students on the books of the College were 255, of whom 251 were matriculated and 4 non-matriculated. Of these 255 students 199 were enrolled in the Faculty of Medicine. Among the pressing wants of the College that of a new chemical laboratory stands foremost. The professor reports that not half the requisite number of working benches was available for the students who attended lectures in the practical branch of his subject. The arrangements for ventilation and for storage of apparatus are also defective. The rooms occupied by this department are required for a physical laboratory and for an engineering and technical museum. The need of the former is shown by the fact that the professor of Natural Philosophy is obliged, by the smallness of his lecture-room, to divide his class in Practical Physics into several sections. An excellent site for building may be had in the Materia Medica garden. The President points out that a new chemical laboratory, fully provided with the most recent appliances and apparatus, is approaching completion in Queen's College, Belfast, and he therefore hopes that a similar boon, so often applied for, will no longer be withheld from Queen's College, Cork.

Lurgan Waterworks.

It has been determined to supply Lurgan with water from Lough Neagh, and the Government have promised to advance a sum of £21,000 to carry out the necessary works. A special meeting of the Town Commissioners was held last Saturday to consider tenders for the carrying out a contract for the construction and erection of reservoirs, filter beds, machinery houses &c. A tender for £10,650 was accepted.

Deaths of Centenarians.

Daniel Lyons died at Castleisland last week aged 103 years. Lyons fought in the Peninsular War, and had been a pensioner for the last sixty-eight years. James Lynch died at Ballycumber, King's County, also aged 103. He retained his mental faculties to the last, and attended to his work until a few minutes before his death. He dropped down dead while out walking.

Military Infirmary, Phœnix Park.

The military authorities, acting on the suggestion of the principal medical officers, have determined to close the Royal Infirmary to the admission of patients in consequence of the insanitary condition of the grounds. It is stated that the patients at present in the infirmary and the attendants will be accommodated in a portion of Steevens' Hospital.

Death of Mr. Gregory Sale.

I record with regret the death of this gentleman—highly esteemed in the locality in which he practised—which occurred on Sunday last, at his residence, Newpark House, Kilmeague, co. Kildare, after a tedious illness from the effects of influenza; he was forty-seven years of age. He was naturally of a somewhat delicate constitution, and suffered of late a good deal from rheumatism. The complications of influenza which he suffered from were prostatic abscess and neuritis of the arm. The latter caused such intolerable agony that he required very large doses of opiates several times repeated to produce any sleep. Suffering such intense torture, and with an already enfeebled constitution, it is not surprising that he succumbed after several months' suffering. He leaves a widow and a daughter to mourn their loss.

Health of Dublin for 1891.

The report of Sir Charles Cameron, medical officer of health for the past year, has just been issued. The births in Dublin Registration District numbered for the year 9850, or 29 per 1000; while the deaths amounted to 9195, or 25·5 per 1000. Zymotic diseases caused 865 deaths, or 390 below the average number for the past ten years. It is gratifying to note that the mortality among children has of late fallen considerably. There was not a single death from small-pox in Dublin during 1891, only 2 deaths from measles, and 3 from typhus fever; while whooping-cough caused 134 deaths. But, although typhus fever may be said to have disappeared, typhoid fever shows no decrease. During 1891 the deaths from typhoid fever numbered 172, or in the ratio of 52 per 100,000, and as to the cause of this increase of

typhoid fever cases and consequent mortality it is difficult to conjecture, especially as last year the disease was more prevalent than in former years. Defects in house drains and sewage matters in the soil are supposed to have some bearing on the matter, and no doubt the house drains in a large proportion of Dublin houses are to a great extent defective, and it has been suggested that the subsoil is saturated with water which has been allowed to accumulate, rendering the site damp and unhealthy, and that this is the most likely cause. Sir Charles Cameron says that no accurate scientific explanation of the cause of the undue prevalence of typhoid fever in Dublin has yet been published. The most probable hypotheses are those which indicate polluted soil, and defective sewers and house drains as the principal causes. As to soil pollution, there is no doubt that it prevails largely, and the greater part of Dublin is literally built upon a "water-logged site." For the greater part of the twenty-four houses the mouths of the main sewers which open on the River Liffey are closed by valvular tidal gates; it is only when the tide is low that the sewage of Dublin flows into its outlet (the Liffey), and it is only when the tide is out that the subsoils are drained. For a large portion of the day, therefore, drainage is suspended in the soils, and they acquire that damp and (in summer) warm condition so favourable to the development of low organisms.

Pharmacy Prosecutions.

Two members of a most respectable firm of chemists in Dublin were prosecuted at the instance of the Pharmaceutical Society this week on the charge that last month medical prescriptions were compounded by them contrary to the Pharmacy Act 38 and 39 Vic., cap. 7, sec. 30. Fines were inflicted in two of the cases of £5 each and three guineas costs. Prosecutions for breaches of the Pharmacy Act are no doubt right and proper, but if the society were to investigate as to whether some of their licentiates are not busily engaged in counter prescribing, probably they would be disagreeably surprised.

The Belfast Royal Hospital.

On Monday, Aug. 22nd, the quarterly meeting was held and from the report presented I learn that during the previous three months there were 690 intern patients and 5371 extern cases. All accounts against the hospital up to the end of July are paid, this result being due to the centenary bazaar, but, compared with last year, there is a falling-off in general subscriptions and in church collections; while, on the other hand, there is an increase in the contributions of the working-classes. Dr. T. K. Wheeler was re-elected surgeon and Dr. J. A. Lindsay physician, and Mr. Davidson was appointed house physician in place of Dr. Mitchell, resigned.

A Wealthy Pauper.

At the usual meeting of the Board of Guardians, held on Aug. 23rd, the master reported that a man who was admitted on the previous day had in his possession a number of Ulster Bank notes and American bonds representing a sum of £1335. It was decided to make inquiries whether there were any friends who would take charge of him.

On the recommendation of the Duke of Abercorn the Lord Chancellor has appointed Mr. A. W. Flood, R.N., F.R.C.S. Eng., of Bundoran, county Donegal, to the Commission of the Peace for the county of Donegal.

Mr. Thomas Collins has been re-elected representative of the Apothecaries' Hall on the General Medical Council.

Mr. William Henry Digges, L.R.C.P. Edin., of Sackville-street and Acourt Lodge, Merrion, has been placed on the Commission of the Peace for the city of Dublin.

The death is reported at Santas, South America, from yellow fever, of Mr. Matthew J. McDonogh, L.R.C.S.I. &c., eldest son of Mr. F. J. McDonogh, J.P., of Willmount House, Portumna.

August 23rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Ménière's Disease a Symptom of Chronic Bright's Disease.

PROFESSOR DIEULAFOY was, I believe, the first to call attention to the frequency of auditory troubles in the course of chronic interstitial nephritis. That clinician indeed regards them as more frequent than troubles affecting the organ of vision. The ear complications take the form of generally incomplete deafness, accompanied or unaccompanied by noises, and sometimes associated with sharp pains in the ear or in the face. Dr. Bonnier has recently conducted some inquiries on this subject and he finds that "auricular Brightism," as he denominates this condition, may manifest its presence, not only by the above symptoms, which are referable to cochlear changes, but by others dependent upon morbid modifications of the labyrinth. These latter remind one pretty accurately of the condition first described by Ménière, consisting as they do of vertigo, nausea, vomiting, syncope and apoplectiform phenomena, gyratory movements, unsteadiness of gait and irresistible falls in a given direction. This form of Ménière's disease is, according to Dr. Bonnier, paroxysmal in character, and it is generally due to vaso-motor troubles, such as congestions, hæmorrhage or œdema of the internal ear determined by uræmia. It may be an early indication of kidney disease or appear late in its course. Quinine, which is so successful in the ordinary form of Ménière's disease, is useless here, the only efficient means of combating it being recourse to an exclusive milk diet. Under the influence of this simple means of treatment it speedily gives way. This observation of Dr. Bonnier once more emphasises the importance of examining the urine in the presence of any symptoms of which the origin appears obscure.

Hydrophobia in Paris and in the Department of the Seine.

From a report just compiled by Dr. Dujardin-Beaumetz for the Sanitary Board of the Seine Department it appears that in the period comprised between Jan. 1st, 1881, and Dec. 31st, 1891, 101 persons died of hydrophobia in the capital and in the Department in which it is situated. Of these, 74 were males and 27 females. The prevalence of the disease was most marked in 1881 (21 cases), 1885 (22 cases) and 1888 (19 cases). The attention of the police authorities having been drawn to the evils of canine vagrancy at each of these dates, the malady became quickly more rare. The statistics of the Institut Pasteur are worth transcribing, as they go to prove irrefutably the efficacy of the inoculations therein practised. The figures run thus:—

	Persons treated.	Deaths.	Mortality.
1887	306	3	0·97 per cent.
1888	386	5	1·29 ,, ,,
1889	236	3	1·27 ,, ,,
1890	95	0	0·00 ,, ,,
1891	201	0	0·00 ,, ,,

From 1886 to 1892, 11,029 persons suffering from dog-bites were treated at the institute. Of these patients 98 succumbed despite the treatment, making a mortality of ·88 per cent.

The Health of Paris.

In my last letter but one I was able to announce an encouraging improvement in the health of this metropolis, particularly with regard to the endemic of cholera, which has been our unwelcome guest of late. The report for the first fortnight of the present month of the Permanent Vigilance Committee of the Conseil d'Hygiène de la Seine has recently been issued, and it is, on the whole, reassuring reading. From it we gather that from July 20th to Aug. 3rd there died in the suburbs, of *diarrhée cholériforme*, seventy-two persons. For the period elapsing between Aug. 4th and 17th the fatal cases had fallen to thirty-three. In Paris itself, the deaths during the first and the second periods respectively were thirty-four and sixteen. This latter figure coincides pretty exactly with that usually found during the hot season of the year. It is only surprising that the exceptionally intense heat (10°C. above the usual summer temperature) that prevailed for so long a time should not have had the effect of further increasing this very moderate mortality from diarrhœa. Sixteen deaths in a population of over two and a-half millions is nothing very alarming. Notwithstanding that the authorities are not relaxing in their efforts to ward off the threatening foe, and 20,000 sanitary leaflets are to be forthwith distributed amongst the people through the agency of the Prefecture of Police. I regret to say, however, that an increase of typhoid fever cases is announced, there having been reported to the Bureau des Épidémies ninety-three cases for the first fortnight of the present month, as against seventy-seven for the last fortnight of July.

Paris, Aug. 24th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Cholera Nostras in Germany.

ON the 21st inst. twenty-two persons fell ill of so-called cholera nostras in Hamburg, and seven of them have died. Two deaths from the same disease are also reported from the Governmental circle of Namslan in Silesia.

Professor Virchow.

Professor Virchow arrived at Warsaw on the 11th inst., was received with all due honour by a deputation of the medical men of that city, visited all the hospitals and museums, and left on the 12th for the Congress of Anthropologists and Archæologists at Moscow, accompanied by his son, Professor Hans Virchow, and a young Russian savant, Dr. Popow. From Moscow the dauntless old man intended to proceed to the interior of Russia to study the cholera epidemic. A portrait of him by Hans Fechner, which was exhibited at this year's exhibition of the Berlin Academy of Art, has been bought by a citizen of Berlin and presented to the Children's Hospital, founded by the Emperor and Empress Frederick, energetically assisted by Professor Virchow and others, where it is hung in the pavilion for external diseases.

The Foot-and-mouth Disease in Saxony.

The foot-and-mouth disease has been spreading alarmingly in Saxony during the last few weeks. No fewer than 393 agricultural establishments were declared infected between the 31st July and the 14th inst. In very many cases the infection is stated to have been carried by human beings.

"A Wise Woman."

A boy near Berlin sprained his foot in the first week of this month. His mother fetched a so-called "wise woman" (Kluge Frau) who had acquired a reputation for miraculous cures. She resolved to cure the boy by "sympathy." She pulled and squeezed the foot, repeating formulas the while, till the poor lad fainted with pain. To enhance the effect she scratched the skin of the swollen foot at several places and rubbed ointment into the wounds. Next morning the whole leg was swollen and extravasated with blood. A doctor was sent for and declared the boy to be suffering from blood-poisoning, which rendered it necessary to amputate the leg. The operation was performed in the Charité, and the "wise woman" is to be, or has been, prosecuted.

Tramway Hygiene.

The following letter from a medical man to one of the Berlin daily newspapers is likely to interest many of your readers: "A strong young man can certainly bear standing for hours together without feeling any special inconvenience; nay, perhaps, for a while, though wind and weather are rough enough upon him in his almost unprotected place, he hardly feels the hardship to be one at all. But the fact is that the human body is not adapted by nature for such uninterrupted effort; it needs the alternation of work and rest, and the interval of a minute or two at the end of the drive can hardly be regarded as deserving the latter designation. The consequence is—to single out the main evil only—that disturbances of the circulation set in, followed, above all, by varicose veins, which look very harmless at first, but which in course of time, and especially on the approach of old age, may become a terrible plague and prepare the way for those incurable ulcerations which render those who suffer from them unfit for work of any kind. Two little seats, one in front and one behind, so constructed that they can be folded down at will, would suffice considerably to improve the situation of tramway officials, without narrowing the room for passengers or diminishing the efficiency of the service."

Berlin, Aug. 23rd.

PURIFICATION OF SEWAGE AT PUDSEY.—The Pudsey Local Board has instructed Mr. W. Spinks, civil engineer of Manchester, to prepare a plan for the erection of sewage works on ten acres of land at Hough Side. The cost is estimated at £3000, and about three and a half acres will be thus utilised. The system to be adopted will be that of precipitation with prepared filters. The consent of the Local Government Board is the only preliminary to the carrying out of the proposed plan.

Medical News.

UNIVERSITY OF EDINBURGH.—The following candidates have received the degree of Doctor of Medicine:—

*Allison, R. Dunlop Reid, M.B., C.M., Scotland (with Second-class Honours.)
†Beatton, Gilbert Taylor, M.B., C.M., Scotland.
*Brock, George Sandison, M.B., C.M., Scotland (with Second-class Honours).
†Campbell, Alfred Walter, M.B., C.M., Australia.
†Chasseaud, Henry Maurice, M.B., C.M., Asia Minor.
‡Clark, Henry Martyn, M.B., C.M., India.
Clarke, Edmund Wearne, B.Sc., M.B., C.M., England.
‡Clemow, F. Gerard, M.B., C.M., Eng. (with Second-class Honours).
Closs, Joseph Osborne, M.B., C.M., Scotland.
‡Cullen, George Matheson, M.B., C.M., Scotland.
Dick, James Adam, B.A., M.B., C.M., Australia.
Doig, William, M.B., C.M., Scotland.
†Ezard, Edward Henry, M.B., C.M., England.
‡Fox, Richard John, M.B., C.M., India.
Gibson, Edmund Valentine, M.B., C.M., England.
*Gillespie, Alexander Lockhart, M.B., C.M., Scotland.
‡Hall, William Winslow, M.B., C.M., India.
‡Hallen, Arthur Herbert, M.B., C.M., England.
‡Havelock, John George, M.B., C.M., England.
‡Keay, Joseph Hay, M.A., M.B., C.M., Scotland.
Kitchin, James Tyson, M.B., C.M., England.
‡Leslie, George, M.B., C.M., Scotland (with Second-class Honours).
‡Lockwood, William, M.B., C.M., England.
‡MacGregor, Alexander James, M.B., C.M., Scotland.
M'Kie, Norman James, M.B., C.M., England.
‡Magrath, Chas. William Stanford, M.B., C.M., England.
Mansel, Charles John Linskill, M.B., C.M., England.
Maynard, Edward Forster, M.B., C.M., England.
Meadows, Robert Thornton, M.B., C.M., Canada.
Mitchell, William Gordon, M.A., M.B., C.M., Scotland.
Morison, Basil Gordon, M.B., C.M., India (with First-class Honours).
Munro, Andrew Watson, M.B., C.M., Scotland.
Murray, William, M.B., C.M., Scotland.
Northcote, Augustus Beauchamp, M.B., C.M., England.
Pare, John William, M.B., C.M., England.
Parham, William Maskelyne, M.B., C.M., England.
‡Playfair, John, M.B., Scotland.
†Poole, Thomas Dobson, M.B., C.M., England.
Pope, Roland James, B.A., M.B., C.M., Australia.
†Russell, James, M.A., M.B., C.M., Scotland.
Savory, Charles Butler Beck, M.B., C.M., England.
‡Simpson, James Bertie, M.A., M.B., C.M., Scotland.
Someren, George Arbuthnot van, M.B., C.M., Scotland.
‡Symonds, George Henry Hamilton, M.B., C.M., England.
Thomas, William Evans, M.B., C.M., Wales.
Thompson, Isaac, M.B., C.M., England (with Second-class Honours).
Thomson, J. Christopher, M.A., M.B., C.M., Scotland (with Second-class Honours).
Thornton, George, M.B., C.M., England.
‡Turner, Alfred, M.B., C.M., England.
*Turner, W. Aldren, M.B., C.M., Scotland (with First-class Honours).
Walcot, Thomas, M.B., C.M., England.
‡Walker, Edward, M.B., C.M., England (with First-class Honours).
Ward, T. Hamilton, M.B., C.M., England (with First-class Honours).
Watson, William Muir Crawford, M.B., C.M., Scotland.
Webb, Sidney Roberts, M.B., C.M., England.
Weston, William Henry, M.B., C.M., England.
*Whiting, Arthur John, M.B., C.M., England.
*Wilson, Theodore Stacey, B.Sc., M.B., C.M., England (with Second-class Honours).
Winder, Arthur Benjamin, M.B., C.M., England.
‡Wise, Robert, M.B., C.M., Scotland.

* Received Gold Medals for their Dissertations.
† Deemed worthy of competing for the Dissertation Gold Medals.
‡ Commended for their Dissertations.

The following candidates have received the degrees of Bachelor of Medicine and Master in Surgery:—

Adamson, R. Edward, England.
Allan, James, Scotland.
Ancrum, G. Wayland, England.
Anderson, James Shirras, M.A., Scotland.
Armstrong, R. Henry, England.
Bagram, Geo. Joakim, Armenia.
Barber, Thaddeus B., West Coast of Africa.
Barnardo, G. Fleming, England.
Bassano, T. Matthias, England.
Beddie, Lewis B., M.A., Scotland.
Bell, George, England.
Benson, H. P. D'Arcy, Australia.
Beveridge, J. J., M.A., Scotland.
Bill, George, Australia.
Bond, Chas. Hubert, England.
Bremner, Dugald C., Scotland.
Brown, J. Chalmers, Scotland.
Brown, T. M'Lachlan, Scotland.
Browne, Hablot J. M., England.
*Brownlie, Alexander, Scotland.
Brunton, W. M'Queen, Scotland.
Burn, David Haitly, Scotland.
Butler, F. Sydney, Cape Colony.
Butters, George, Scotland.
Campbell, D. Graham, Scotland.
Campbell, W. Sibbald, Scotland.
Carruthers, John F., Scotland.
Christie, J. G., M.A., Scotland.
Ciliers, Pieter G., Cape Colony.
Clayton, F. H. Aylen, England.
Cock, Geo. Herbert, England.
Coles, Herbert Davis, England.
Coope, Anthony B. J., England.
Corson, R. Aitchison, Scotland.
Davidson, S. G., M.A., Scotland.
Davies, Richard, England.
Dick, John Lawson, Scotland.
Dickson, George, Scotland.
Dobie, Edward Cyril, England.
Donald, Chas. Wm., Scotland.
†Douglas, Alex., M.A., England.
Dubourg, Wm. Ernest, Scotland.
*Easterbrook, C. Cromhall, M.A., England.
†Edington, Daniel Chas., Scotland.
Ehrke, Frank Leigh, England.
†Evans, John James, Wales.
Evans, Rufus Easson, England.

* Received First-class honours.
† Received Second-class honours.

Fellows, F. Macfarlane, England.
†Fells, Arthur, England.
Fentem, Thomas, England.
Fletcher, William, England.
Fortune, Ernest Geo., Scotland.
†Fowler, Jas. Stewart, Scotland.
Foye, Martin Hugh, Ireland.
Fullarton, J. A., B.A., New Zeal.
Garland, Edwd. Blake, England.
Gibb, Wm. Scott, Scotland.
Gordon, William, England.
Gow, William Baxter, Scotland.
†Gray, Robt. Walker, Scotland.
Gray, William, Scotland.
Green, Vincent, England.
Gregory, Wm. Herbert, England.
Greville, Ernest E. T. B., England.
Grimmer, Geo K., B.A., Canada.
Guthrie, R. Lyall, M.A., Scotland.
Guthrie, T. Clement, Scotland.
Hadden, Herbert H., Ireland.
Halley, Geo., M.A., Scotland.
Hamilton, John Archd., Scotland.
Hare, Fredk. J., B.Sc, England.
Hardy, Leonard E., New Zealand.
Hawkins, Edgar, M.A., England.
Haworth, W. Ellwood, New Zeal.
Hendry, Alexander, Scotland.
Hewat, D. Bennie, South Africa.
Hewer, H. M'Donald, England.
Higson, John Russell, England.
Hogg, Gustave Heuze, Tasmania.
*Home, George, New Zealand.
Hopkins, Arthur Henry, Ireland.
Hugo, Cornelius J., Cape Colony.
Hulme, Geo. Fredk., England.
Hutchinson, F. H. Grant, Eng.
Ingram, Alexander, Scotland.
Irvine, Louis G., M.A., Scotland.
Jareja, Sir Baghvat Sinh, India.
Johnston, Jas Hunter, England.
†Johnston, Robt. John, Scotland.
Johnstone, George, England.
Jones, Howell Buckland, Wales.
*Keng, Lim Boon, Singapore.
Knox, Robert, Scotland.
Laing, Jas. T. Currie, Scotland.
Lawrie, Wm. Duncan, England.
*Leslie, Rob. Murray, M.A., B.Sc., Scotland.
Liddell, John R., Scotland.
Littlejohn, E. S., B.A., Australia.
Locke, Percival Vincent, Pinang.
Macarthur, W. Forrest, England.
*Macaulay, D., M.A., Scotland.
M'Clew, James, Scotland.
M'Clymont, John, Scotland.
M'Donald, James, Scotland.
M'Ewen, Alexander, Scotland.
Macindoe, Jas. Gray, Scotland.
M'Kerrow, James, England.
Mackinlay, W. Harrison, England.
Maclean, Jas., M.A., Scotland.
Macmillan, J., M.A., B.Sc., Scot.
Macmorran, A. H. Muir, Scotland.
†Macnaughton, G. W. F., Scotland.
†Malabre, Philip Oscar, Jamaica.
Mann, Gustav, India.
Martin, John Little, England.
Mathieson, G. Brand, Scotland.
Maxwell, Raymond, Tasmania.
Meikle, Alex Jamieson, Scotland.
Melville, David, Scotland.
Millard, C. Killick, England.
Mirza, Ahmed, India.
Mitchell, Alexander, Scotland.
Mitchell, G. Benjamin, Scotland.
Moon, Alex. Rae, Scotland.
Moorhouse, Jas. E., M.A., B.Sc., England.
Morison, John, Scotland.
Munnik, Gerhardt C., Cape Colony.
Murray, James Hay, Scotland.
Naidu, Muthyala Govindurajulu, India.
Newman, George, England.
Nicholl, Edwd. M'Killop, India.
Nicoll, John M'Donald, Scotland.
Nicol, Percy Wood, Scotland.
Nobbs, Athelstane, England.
Nuttall, Thos. Edwd., England.
Oldmeadow, L. J. H., Tasmania.
Parker, Charles, Tasmania.
Parkes, W. H., New Zealand.
Paterson, David W. H., Scotland.
Pearce, Chas. Ross, England.
Peterkin, George, England.
Petrie, R. O., M.A., Scotland.
Pimblett, Wm. Henry, England.
Pollard, Geo. Wilfred, England.
Ponder, C. Frederick, Scotland.
Porter, George, England.
Proudfoot, Robert, Scotland.
Putnam, W. G., B.A., Nova Scotia.
Rae, J. R. Musgrave, England.
Reid, Matthew Alex., Australia.
Robertson, W. Nathaniel, Scotld.
Robson, O. D., M.A., England.
Roger, William, England.
Rowland, H. Armitage, England.
Russell, Jas. Lawson, Scotland.
Schmidt, P. Wolfstadt, England.
Scott, William, M.A., Scotland.
Sheult, Raoul, Trinidad.
Sellar, William Grant, Scotland.
†Shaw Jas. Brownlee, Scotland.
Shaw, Peter, William Scotland.
Simitoponlos, C. D., Smyrna.
Simpson, Alex. Tweedie, Scotland.
Simpson, Walter P., Scotland.
Slane, Herbert James, India.
Sloan, Thos. G., M.A., Scotland.
Smith, A. Scott, M.A., Scotland.
Smith, W. R., B.Sc., Scotland.
Somerville, William, Scotland.
Spettigue, William, England.
Sproule, Wm., New South Wales.
Stoddart, James, B.A., Scotland.
Stuart, Alexander, Scotland.
Sutherland, James, New Zealand.
†Talbot, A. G., B.A., New Zealand.
Talbot, Matthew W., England.
Templeton, George, Scotland.
Thompson, Cuthbert, Ireland.
Thompson, James L., Australia.
Thomson, Charles, India.
Thomson, H. Torrance, Scotland.
Tibbits, Walter, England.
Tolt, F. J. du, B.A., Cape Colony.
Truter, R. Meeser, South Africa.
Turkhud, Dnyaneshwar Atmaram, India.
Tyrie, C. Campbell B., Scotland.
Walker, A., M.A., B.Sc., Scotland.
Walace, John, Scotland.
Walls, James Monteith, Scotland.
Watson, Alex. Edward, Scotland
Watson, Douglas C., Scotland.
Watson, Jas. Kenneth, England.
Weightman, Edwd. J., England.
Werdmüller, Victor, Cape Colony.
Whait, John Robert, England.
White, William John, Scotland.
Whitttome, Harry, England.
Williams, Robert Morris, Wales.
Wilson, John Clark, Scotland.
Wilson, John Wilford, England.
Young, Ludovic Unwin, Scotland.
Young, Meredith, England.
Young, William, New Zealand.

* Received First-class Honours.
† Received Second-class Honours.

The following awards have been made:—

Ettles Scholarship.—Robert Murray Leslie, M.A., B.Sc.. M.B., C.M.

Beaney Prize in Anatomy and Surgery.—Alexander Brownlie, M.B., C.M.

Stark Scholarship in Clinical Medicine.—Robert Murray Leslie, M.A., B.Sc., M.B., C.M.

Freeland Barbour Fellowship in Anatomy, Physiology, and Pathology.—George Home, M.B., C.M.

Goodsir Memorial Prize.—George Neil Stewart, D.Sc., M.D., and Arthur John Whiting, M.D.

Gunning Victoria Jubilee Edward Forbes Prize in Zoology.—Gregg Wilson, M.A., B.Sc.

Gunning Victoria Jubilee Allison Prize in Public Health and Medical Jurisprudence.—Alexander Houston, M.D.

Buchanan Scholarship in Gynæcology.—John Lawson Dick, M.B., C.M.

James Scott Scholarship in Midwifery.—Charles Cromhall Easterbrook, M.A., M.B., C.M.

Wightman Prize in Clinical Medicine.—D. A. Welsh, M.A.

The following are the official lists of candidates who passed the First and Second Professional Examinations at the University during last month:—

First Professional Examination.—C. W. Anderson, D. N. Anderson, Frederick Anderson, J. W. Anderson, John Ballantyne, N. D. Bardswell, J. A. Bayne, M.A., J. E. H Bennett, J. B. Blaikie, A. B. Blair, W. H. Borrie, F. J. C. Y. Botha, Edwin Bramwell, A. S. Brass, T. A. Brennan, H. S. Brockway, R. M. Broughton, G. S. Brown, H. G. Brown, W. J. Buchanan, B.A., D. A. Cameron, H. J. Cardale, A. G. Carment, Scott Carmichael, S. H. Carr, W. H. Carse,* W. W. Chipman, B.A., A. W. G. Clark,* J. M. Coates, C. B. Crampton, John Crawford, James Davidson, Priyanath Deb, Maurice Dee, Hugh Dewar, Arthur Dickson, J. H. S. B. Douglas, Stanley Ducat, William Duncan, C. W. Eames, J. W. Edwards, A. W. Ellis, John Elliot, William Evans, F. B. Feast, A. M. Fleming, C. C. Forrester, G. O. Franzén, Frederick Gardiner, W. A. Gemmell, R. M. Gibson, John Gilmour, C. J. Gorringe, James Gray, A. Y. Greenwood, J. M. Grieve, M.A., Norman Gunn, R. M. Hall, S. H. Hall, F. A. Hardy, C. M. Hector, George Henderson, G. P. Henderson, John Henderson, J. J. Hewison, M.A., W. H. Hill, John Hirst, J. F. Holden, George Holliday, L. D. C. Howden, A. L. Husband, D. B. Hutchinson, Robert Irvine, Walter Jagger, J. M. Jeffrey, Laurence Ker, James Kirk, B. L. L. Learmonth, R. M. Leith, William Lillie, R. C. Loney, J. R. Lord, P. C. Luttig, B.A., W. L. Lyall, Angus Macdonald, F. B. Macdonald, W. M. Macdonald, John M'Donald, Stuart M'Donald, J. A. Macfarlane, T. H. Macfie, D. M. Mackay, Charles MacLaurin, John M'Master, D. D. M'Neil, A. D. M'Pherson, M.A., Colin M'Vicar, M.A., W. R. Mander, J. L. Majoribanks, J. S. Martin, Joseph Mason, James Massey, G. H. Masson, F. H. Merry, J. A. Milroy, M.A., F. J. R. Momplé, W. A. W. Moore, H. M. Morton, S. K. Mullick, T. M. Ness, M. N. Nicolson, Robert Owen, A. J. Park, H. C. Pearson, J. P. Peterson, Charles Porter, A. S. B. Powell, W. H. Price, R. G. Ralston, J. A. Rees, William Ritchie, W. T. Ritchie, W. H. Robb, David Roger, J. E. Rosenstein, D. R. Rowlands, A. H. Rutherford, C. R. Scott, W. A. Skinner, F. O. de Souza, F. S. Stanwell, James Stenhouse, T. H. Stevenson, G. E. Stewart, John Stoddart, W. E. W. Strickland, A. C. Sturrock, M.A., F. V. Sullivan, F. G. Taylor, H. F. L. Taylor, D. G. M. Teague, F. S. C. Thompson Robert Thornton, F. W. Tweedale, W. A. C. Ussher, J. W. de Vos, Andrew Wallace, Henry Waters, T. E. Watson, David Waterston, James Watt, B.A., H. G. Waugh, G. A. Welsh, A. E. White, Charles R. White, J. H. White, C. S. Wilkinson, A. E. Williams, B. N. Williams, J. T. Williams, W. O. Williams, W. W. Wood, A. D. Yule.

Second Professional Examination.—C. H. Adamson, A. C. Ainslie, M.A., R. Y. Anderson, Harry Armistead (Ayatullah), William Bannerman, F. W. Barton, R. W. Blair, R. St. G. S. Bond, D. J. S. Burt, C. H. H. Cazalet, W. R., Center, D. N. Chatterjee, W. B. Clarke, D. M. Conacher, H. O. Corfield, J. R. Crease, E. A. Dent, E. P. Dickin, G. A. Dickson, P. G. Edgar, Henry Ferguson, Arthur Foster, G. E. Gabites, W. H. Gaunt, J. R. Gilmour,* Lachlan Grant, James Gray, D. A. Greaves, F. H. Hardman, W. B. Hetherington, J. E. Hewlett, John Hume, T. J. Jehu, Evan Jones, W. H. Jones, John Kippax,* G. C. Laing, John Lawrie, J. L. Leadbetter, J. A. Lee, Donald MacDonald, Andrew M'Neil, B.A., P. W. MacVean, W. S. Malcolm, J. M. Menzies, T. B. Moore, B.A., J. M. Morris, M.A., David Murray, C. J Murray, F. B. Oliphant, E. L. Owen, J. M. Pereira, E. L. Phillips, G. B. Peterson, G. R. Plante, S. W. Prowse, B.A., J. H. Reynolds, C. H. Ridley, F. W. H. Robson, J. E. Rogers, A. A. Ross, C. E. Salt, Henry Scott, W. E. Scott-Moncreiff, J. H. Seon, P. J. Sharp, T. D. S. Shaw, T. R. Sibbald, W. E. Smith, John Sorley, M.A., A. P. Stevenson, J. W. Sutcliffe, Thomas Taylor, H. W. Vaughan Williams, J. G. Walker, J. W. T. Walker, E. E. Waters, J. M. Wishart, J. J. H. Wood, R. J. T. Wright, M.A.

* Passed with distinction.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the respective subjects:—

Surgery—W. D. Akers, St. Mary's Hospital; D. Berne, Royal Free Hospital; F. G. Dorey, Yorkshire College, Leeds; E. G. Firth, Yorkshire College, Leeds; W. Fowler, Durham; E. E. Francis, St. Bartholomew's Hospital; W. Handcock, Yorkshire College, Leeds; B. H. F. Leumann, St. Bartholomew's Hospital; W. S. Mercer, Charing-cross Hospital; W. H. F. Noble, London Hospital; A. V. Peatling, St Thomas's Hospital; B. Saul, Charing-cross Hospital; D. L. Thomas, London Hospital; W. Thomas, Yorkshire College, Leeds; A. E. Wilson, St. Mary's Hospital.

Medicine, Forensic Medicine and Midwifery.—R. S. Bernard, King's College; F. Dove, London Hospital; E. G. Firth, Yorkshire College, Leeds; V. P. Foote, Charing-cross Hospital; E. E. Francis, St. Bartholomew's Hospital; R. T Gilmour, St. Mary's Hospital; J. L. Iredale, Yorkshire College, Leeds; J. Joule, London Hospital; H L. A. Keller, St. Thomas's Hospital; M. C. Langford, London Hospital; B. H. F. Leumann, St. Bartholomew's Hospital; R. E. Nichols, St. Mary's Hospital; F. J. P. Smith, St. Thomas's Hospital: S Smith, Middlesex Hospital.

Medicine and Forensic Medicine.—J. E. Bailey, University College; W. Handcock, Yorkshire College, Leeds; J. J. Powell, St. Thomas's and Cambridge; D. F. Roberts, Guy's Hospital; J. D. Willis, Owens College, Manchester.

Forensic Medicine and Midwifery.—E. Howgate, Yorkshire College, Leeds; W. S. Newton, London Hospital; J. W. Roberts, Liverpool; W. H Waddington, Owens College, Manchester.

Forensic Medicine.—J. B. Bate, Bristol; A. A. Macfarlane, St Bartholomew's Hospital; A. W. Taylor, London Hospital; J. Wood, St. Thomas's Hospital.

To Messrs. Akers, Bernard, Dove, Firth, Francis, Gilmour, Keller, Langford, Leumann, Macfarlane, Nichols, Noble, F. J. P. Smith, Thomas, and Waddington was granted the diploma of the Society entitling them to practise Medicine, Surgery and Midwifery.

FALL OF A GRAND STAND AT BUXTON.—At Buxton, on Friday last, during the progress of the annual Horse Show, the grand stand, containing some 700 persons, suddenly collapsed. Among the injured was Dr. Allan of Whaley Bridge, whose left leg was broken.

LITERARY INTELLIGENCE.—We are informed that the "History of Guy's Hospital," a book on which Dr. Wilks has, with the assistance of the late Mr. G. T. Bettany, been some time engaged, will be ready for publication in the course of a few weeks.

PUBLIC DISPENSARY, LEEDS.—This institution, in the sixty-eighth year of its existence, maintains its enlarged usefulness and efficient working. An increase upon the year 1891 of 1500 patients were treated during the past twelve months, 3023 patients had been visited at their own homes, and 15,997 visits paid; the number of operations performed was almost double that of the previous year.

THE MANCHESTER CREMATORIUM.—This crematorium, which adjoins the north-west corner of Withington Cemetery, was on Monday last used for the first time. The doors screening the furnace were draped in black, before which the coffin was placed in position, and upon releasing a spring the doors opened and the coffin, which rested upon wheels, ran into the furnace.

THE INFIRMARY, NORTH DEVON.—From the annual report for the past year, just issued, it appears that during the long career of the institution it was never before in so efficient a working order or in a more satisfactory sanitary condition. 655 in-patients and 2317 out-patients respectively received the benefits of the hospital in the twelve months. The Convalescent Home at Morthoe, built and endowed by Mr. Rock and his sister, Mrs. Payne, has been a great boon to patients from the infirmary and to others recommended by the medical men of the neighbourhood. The balance-sheet shows a small balance at the bankers', with £200 on deposit note.

PRESENTATIONS.—Dr. J. J. Hood of Wollongong, New South Wales, on leaving that district for Maclean was presented in May last by the inhabitants with a handsomely illuminated address and a purse of sovereigns.—On the 22nd inst. Dr. G. W. Moseley was presented by the members of the Quorn classes of the St. John Ambulance Association with a handsome dressing-case. In March last Dr. Moseley was the recipient of a richly-mounted walking-stick from the members of the Barrow-on-Soar classes. All the members of the above classes with one exception were successful in passing the examination in first aid.—Dr. T. J. Burroughs of Crondall, Hants, has been the recipient of a testimonial from his patients and friends consisting of an illuminated address and a purse of 125 sovereigns.

THE METROPOLITAN ASYLUMS BOARD.—The Report of the Metropolitan Asylums Board showing the number of patients in the several Metropolitan fever hospitals states that up to August 23rd there were in the Eastern Hospital 387 cases of scarlet fever, 81 cases of diphtheria, 2 cases of typhus and 39 cases of enteric fever. The North-Western Hospital had 383 cases of scarlet fever, 83 of diphtheria and 21 of enteric fever. The Western Hospital showed 247 cases of scarlet fever, 36 of diphtheria and 7 of enteric fever. In the South-Western Hospital there were 295 cases of scarlet fever, 64 of diphtheria and 15 of enteric fever. The South-Eastern Hospital contained 358 cases of scarlet fever, 22 of diphtheria, one of typhus fever and 6 of enteric fever. The Northern Hospital had 657 beds occupied by scarlet fever patients and only 20 by patients suffering from diphtheria; whilst the Gore Farm Hospital showed the highest number of scarlet fever patients—namely, 720.

THE SPREAD OF GLANDERS.—A meeting of cab proprietors and other owners of horses in the north of London was held at Beale's Restaurant, Holloway-road, on Monday last, to "petition Government to compensate for horses slaughtered and to enforce stringent measures to prevent glanders from spreading." Mr. W. Pierson, who occupied the chair, pointed out that small owners could not afford to employ a veterinary surgeon, the consequence being that glanders was allowed to spread. He submitted that the only chance of successfully combating the disease was to get the Government to compensate all owners who slaughtered their horses. Mr. Marcus Stevenson, veterinary surgeon, stated that medicine in this disease was of little avail. The disease, he said, was propagated by allowing animals to drink out of water-troughs and by feeding them out of nose-bags which had been used for glandered horses. He hoped that now water-troughs were closed they would never be opened again.

MEDICAL MAGISTRATE.—Mr. Henry W. Coleman, L.R.C.P. Edin., M.R.C.S., has been placed on the commission of the peace for the borough of Leeds.

ST. ANNE'S-ON-THE-SEA DRAINAGE SCHEME.—The ceremony of cutting the first sod in connexion with this scheme took place on the 18th inst. The plans were prepared by Mr. Bancroft, engineer, of Manchester, and the estimated cost will be about £9000.

SUPERANNUATION.—Dr. Barnes, the medical officer of the Ewell district, Surrey, has been granted a superannuation allowance of £35 and a further sum of £15, conditional on the consent of the Local Government Board.

NEED OF MORTUARY ACCOMMODATION.—In the course of a coroner's inquiry, held at the Queen Victoria inn, Stratford, into the circumstances attending the death of a man who was killed last week on the South-Eastern Railway, the coroner made some pointed and highly necessary remarks on the need of mortuary accommodation. The parochial committee had, it appears, expressed their readiness to contribute to the cost of the building, but the rural authority had not shown any favour to the proposal. In the case in question the body had to be taken charge of by the station master. Doubtless the observations of the coroner in this instance will apply to many districts all over the country.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mr. Frank Clarke Hill, of Penshurst, bequeathed £1000 to the British Home for Incurables, Wanstead, and £200 to the Metropolitan Convalescent Institution. Ex-Provost Duncan bequeathed £2000 to the Brechin Infirmary. Mr. Edmund Crawley, late of Cullum-street, London, bequeathed £200 each to the London Hospital, Guy's Hospital and the Royal Hospital for Incurables, Putney, and £100 to the City of London Truss Society. Mr. Thos. Green, late of the Smithfield Ironworks, Leeds, bequeathed £250 to the Leeds Infirmary, £100 each to the Leeds Dispensary and Cookridge Convalescent Hospital, and £50 to the Eye and Ear Hospital. The Grocers' Livery Company has voted £100 to the Royal Sea Bathing Infirmary, Margate. The trustees of the late Mr. Alex. McNab, of Middleton, Kerse, Menstrie, have allocated £500 to the Alloa Hospital. The late Mr. Greswolde Williams bequeathed £1000 to the Worcester Infirmary. A donation of £60 13s. 4d., the result of the Friendly Societies' Hospital demonstration, has been forwarded to the Hartlepools Hospital. A native of Blandford bequeathed £1000 to the Blandford Cottage Hospital. A sum of £75 has been handed to the treasurer of the Children's Hospital, Great Ormond-street, being the result of the sixth annual demonstration and church parade in aid of that institution.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ASHWORTH, J. HENRY, M.D., M.R.C.P., Edin., has been reappointed Honorary Medical Officer to the Halstead Cottage Hospital.

BELL, W. K., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Shaldon Sanitary District of the Newton Abbott Union, vice Corbould, deceased.

BEVAN, W. L. P., M.D., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Alton Urban Sanitary District of the Alton Union, vice Wright.

BOWER, A. E., M.R.C.S., has been appointed Medical Officer for the Eastry Sanitary District and for the Workhouse of the Eastry Union.

BRANNIGAN, H. C., M.D., M.Ch. Irel., L.R.C.P., L.R.C.S. Edin., has been appointed Resident Surgeon to the Mount Morgan Hospital, Queensland, vice Hunter, resigned.

BROMLEY, JOHN B., M.R.C.S., L.S.A., has been reappointed Honorary Medical Officer to the Halstead Cottage Hospital.

BULMAN, F., M.B., B.S. Durh., has been appointed Medical Officer for the Workhouse of the Newport (Mon.) Union, vice Jennings, deceased.

CAYLEY, C. H., M.B., B.C. Camb., M.R.C.S., L.R.C.P., has been appointed an additional Public Vaccinator for th District of Temuka, New Zealand.

CHAMBERS, H. F. T., L.R.C.P., L.R.C.S. Edin L.F.P.S. Glasg., has been appointed Medical Officer for the Wareham No. 2 Sanitary District and the Workhouse of the Wareham and Purbeck Union.

DODS, JAMES, L.R.C.P., L.R.C.S. Edin., has been appointed Acting Government Medical Officer at Montalbion, Queensland.

EDIE, ROBERT, M.B., C.M. Oxon., has been appointed House Surgeon to the Manchester Royal Eye Hospital, vice C. Ramage.

FULLERTON, ANDREW, M.B., B.Ch., has been appointed House Surgeon to the West Kent General Hospital, Maidstone.

GIBSON, C. G., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Launceston Urban Sanitary District of the Launceston Union, vice Lunn resigned.

HARING, NATHAN C., M.B. Lond., M.R.C.S., has been appointed Honorary Assistant Physician to the Manchester Hospital for Consumption and Diseases of the Throat.

HILL, F. A., M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Thorncombe Sanitary District of the Axminster Union.

JACKSON, J. J., L.R.C.P. Edin., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Wakefield Rural Sanitary District, vice Walker, resigned.

JOHNSON, F., L.R.C.P. Irel., M.R.C.S., has been reappointed Medical Officer and Public Vaccinator for the Hedgerley Sanitary District of the Eton Union.

JONES, HUGH R., M.A., M.D., B.C. Cantab, B.Sc. Lond., has been appointed Honorary Assistant Surgeon to the Liverpool Infirmary for Children.

KIRBY, S. J. J., M.D. Brux., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Stow Union.

MILLER, J. T. ROGER, L.S.A. Lond., has been appointed Medical Officer and Public Vaccinator for the Leavening Sanitary District of the Malton Union.

MONTGOMERY, W. P., B.A. Oxon., M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon to the Ancoats Hospital

MORRISON, R. H., M.B., C.M. Edin., has been appointed Health Officer for Oakleigh Borough, Victoria, Australia.

NAYLOR, A. G. E., L.R.C.P., L.R.C.S. Edin., has been appointed a Public Vaccinator at Romsey, Victoria, Australia.

PALING, ALBERT, M.R.C.S., L.R.C.P., L.S.A., has been appointed Assistant Resident Medical Officer for Whitechapel.

PATON, R. J., M.B., C.M., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the St. Woolos Sanitary District of the Newport (Mon.) Union.

PITT, C. W., M.R.C.S., has been appointed Medical Officer of Health for the Rural Sanitary District of the Malmesbury Union, vice Tolerton.

SAWYER, R. H., M.R.C.S., has been appointed Medical Officer of Health for the Shaftesbury Urban Sanitary District of the Shaftesbury Union.

SINCLAIR, R. D., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Health Officer for Flinders and Kangerong Shires, Victoria, Australia.

SKOTTOWE, A. J. F., M.D., C.M. Glasg., has been appointed Hospital Surgeon, Medical Officer of the Burgh, and Police Surgeon, Helensburgh, vice Messer, resigned.

SMITH, T. H., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for the Reddish Urban Sanitary District.

SOUTER, J. C., M.D., C.M. Aberd., has been appointed a Public Vaccinator at Maitland, South Australia.

WILLIAMS, EGERTON H., M.R.C.S., L.R.C.P., has been appointed Clinical Assistant to Whitechapel Infirmary.

WOOD, JOHN CUNDELL, L.R.C.P., D.P.H. Edin., Deputy Medical Officer of Health, has been appointed Medical Officer *pro tem*, vice A. E. Harris, resigned.

WOOD, WILLIAM, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Cartmel Sanitary District of the Ulverstone Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BERKS ASYLUM, Moulsford, near Wallingford.—Second Assistant Medical Officer. Salary £100 a year, rising £10 annually to £120, with furnished apartments, board &c., and washing.

BUNTINGFORD UNION.—Medical Officer and Public Vaccinator for the North-east and South-east districts of the Union. Salary £80 per annum, exclusive of medical extras and vaccination fees. (Letters to the Clerk to the Guardians, Board Room, Union House, Buntingford, Herts.)

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's-inn-road, W.C. House Surgeon. Rooms, coals, and lights provided.

CHELTENHAM GENERAL HOSPITAL.—Resident Surgeon for the Branch Dispensary. Salary £180 per annum, with partly furnished house, coals and gas.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Board and residence and allowance for washing provided. (Apply to the Secretary, Office, 24, Finsbury-circus, E.C.)

DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION. Assistant Surgeon. Salary £160 per annum, out-door, with an allowance of £44 for cab-hire and additional fees for Midwifery of 5s. 3d. in each case. The salary to be advanced £10 in six months after appointment and afterwards £10 per annum until it reaches £250 per annum (providing satisfaction is given to the Committee). (Apply to Mr. Cooper, 63, Abbey-street, Derby.)

GENERAL HOSPITAL, BIRMINGHAM.—Assistant House Surgeon for six months. Residence, board, and washing provided.

GENERAL HOSPITAL, Nottingham.—Senior Resident Medical Officer, for two years. Salary £120 for the first year, rising £10 a year up to £150, with board, residence, and washing.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

LINCOLN UNITED FRIENDLY SOCIETIES' DISPENSARY, Lincoln.—Qualified Assistant as Second Officer. Salary £150, out-door.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Assistant Resident Medical Officer.

M. S., THE LANCET Office, 423, Strand, W.C.—Qualified Gentleman for one month in a Public Institution, London, W. Board, lodging, and small remuneration.

NEW MUSEUMS, Cambridge.—The George Henry Lewes Studentship. (Apply to Professor M. Foster, New Museums, Cambridge)

PARISH OF RONSAY AND EGILSHAY.—Resident Medical Officer. Salary £51 per annum. (Apply to Inspector of Poor, Ronsay, Orkney.)

PARISH OF ST. LEONARD, Shoreditch.—Clinical Assistant for the Infirmary, Hoxton-street, N., for six months. Salary £40 per annum, with rations, furnished apartments, and washing in the Infirmary. (Apply to the Medical Officer, 204, Hoxton-street, N.)

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Resident House Surgeon. Salary £80 per annum, with board, lodging, and washing.

SOUTH LONDON MEDICAL AID INSTITUTE, 300, Waterloo-road.—Attending Medical Officer.

SUSSEX COUNTY HOSPITAL, Brighton.—House Physician. Salary £60, rising to £80 per annum at the discretion of the Committee of Management, with board and residence in the hospital, and washing.

UNIVERSITY OF ABERDEEN.—Six Examiners for Graduation in Medicine, for one year each. A grant of £30 to each.

UNIVERSITY OF GLASGOW.—Assistant Examiner in Medicine. The annual fee for the Examinership is £30.

Births, Marriages, and Deaths.

BIRTHS.

DAY.—On Aug. 18th, at Upper Surrey-street, Norwich, the wife of Donald D. Day, F.R.C.S., of a daughter.

GRAY.—On Aug. 19th, at Ryde House, Twickenham, the wife of Dr. J. A. Gray, of Kabul, Afghanistan, of a daughter.

HARPER.—On Aug. 17th, at Rosary-gardens, South Kensington, the wife of James Harper, M.D., of a daughter.

HEDDY.—On Aug. 20th, at 46, Redcliffe-gardens, S.W., the wife of William Jackson Heddy, M.R.C.S. Eng., of a daughter.

HOLMES.—On Aug. 20th, at 14, Old Burlington-street, W., the wife of Dr. W. Reid Holmes, of a son.

MESSITER.—On Aug. 14th, at Charlton House, Dudley, Worcestershire, the wife of M. Arden Messiter, M.R.C.S., of a son.

ROGERS-TILLSTONE.—On Aug. 22nd, the wife of H. Rogers-Tillstone, M.D., of a daughter.

SEWILL.—On Aug. 22nd, at Wimpole-street, the wife of Henry Sewill, M.R.C.S., L.D.S. Eng., of a son.

STURGES.—On Aug. 19th, at Mirzapore, Beckenham, Kent, the wife of Frank Sturges, L.R.C.P. Lond., of a daughter.

WELLS.—On Aug. 19th, at Beckenham, Kent, the wife of A. Primrose Wells, L.R.C.P., L.R.C.S. Edin., M.A., of a daughter.

MARRIAGES.

DENMAN—SHARMAN.—On Aug. 17th, at St. Peter's Church, Bournemouth, Robert Denman, L.R.C.P., L.S.A., of Selborne, Bournemouth, to Hilda, second daughter of the late Eric Rudd Sharman, of Liverpool.

EDWARDS—HOOPER.—On Aug. 17th, at St. Mary's, Bexley, George F. Edwards, M.D., of Bridge House, Bexley, to Constance Elisabeth, eldest surviving daughter of Alfred T. Hooper, of Alderley, Bexley.

FITCH—WILLIS.—On Aug. 16th, at St. Cassyon's Church, Chaddesley Corbett, Worcestershire, Charles Dennis Fitch, M.R.C.S., third son of F. Fitch, Esq., M.D., of Chaddesley Corbett, to Beatrice Mary, elder daughter of H. R. Willis, Esq., of Brockencote Hall, Chaddesley Cornett, and of Kidderminster.

HILL—COX.—On Aug. 16th, at St. Pancras Church, Euston-road, William Henry Hill, M.B., of Church Fields, Basford, to Fanny, elder daughter of Charles James Cox, of Basford, Nottingham.

PURVES—COOK.—On Aug. 23rd, at St. Peter's, Rock Ferry, by the Rev. E. Owen, Llangoed, assisted by the Rev. Paige-Cox, vicar of the parish, and the Rev. D. L. Clarke, Scot Purves, M.D., Alnwick, son of the late T. Purves, Esq., J.P., of Rhifail, Sutherlandshire, to Isabel Cicely, daughter of E. Cook, Esq., of Alnwick.

STEEL—MITCHELL.—On Aug. 17th, at Myrtle Bank, Carriage Hill Paisley, by the Rev. A. Fife Burns, St. George's Parish, assisted by the Rev. W. H. Kellock, of Kilmaurs, Robert Steel, Physician and Surgeon, of Kilmaurs, to Jeannie, youngest daughter of Andrew Mitchell, Esq.

DEATHS.

ABERCROMBIE.—On Aug. 20th, at Harrow, John Abercrombie, M.D., F.R.C.P., of Upper Wimpole-street (formerly of Cheltenham) aged 75.

CROOKES.—On Aug. 15th, at Augusta-gardens, Folkestone, John Farrar Crookes, F.R.C.S., in his 82nd year.

DRYSDALE.—On Aug. 20th, at Beach Lawn, Waterloo, near Liverpool, John James Drysdale, M.D., of Rodney-street, Liverpool, and Pittenchar, Fife, N.B., aged 75.

FORBES.—On Aug. 17th, at Redcliffe, Exmouth, S. Devon, David Forbes, M.D., formerly of Rock Ferry, Cheshire, in the 62nd year of his age.

LANGLEY.—On July 13th, on board s.s. *Saladin*, off the Coast of Western Australia, John Geoffrey Langley, M.B., M.R.C.S., L.S.A., aged 40.

PEARL.—On Aug. 18th, at his residence, Sylvan-road, Upper Norwood, Edward Pearl, M.R.C.S., aged 65.

POLLOCK.—On Aug. 15th, at his residence, Oak Lodge, Wimbledon-park, Robt. Jas. Pollock, F.R.C.S., aged 87.

WAYMAN.—On Aug. 18th, at Foulsham, Norfolk, suddenly, C. P. Scott Wayman, Surgeon.

WOODCOCK.—On Aug. 17th, at Springfield Hall, Wigan, Robert Fraser Woodcock, L.R.C.P. Lond., M.R.C.S. Eng., aged 38.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Aug. 25th, 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry bulb.	Wet Bulb.	Solar Radiation in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 19	29·71	S.W.	64	63	86	68	62	·54	Overcast
,, 20	30·01	W.	60	56	113	74	56	·16	Bright
,, 21	30·27	S.W.	63	58	118	78	55	..	Hazy
,, 22	30·07	S.W.	62	59	117	79	56	..	Hazy
,, 23	29·82	E.	66	62	113	80	60	..	Hazy
,, 24	29·75	S.W.	63	65	115	80	65	·06	Overcast
,, 25	29·70	S.W.	61	59	101	72	59	·05	Overcast

Medical Diary for the ensuing Week.

Monday, August 29.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, August 30.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

Wednesday, August 31.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, September 1.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, September 2.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 3.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

Notes, Short Comments & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

THE STUDENTS' NUMBER.

WE beg to direct the attention of those Deans of Medical Schools and Secretaries of Hospitals who have not yet furnished us with the necessary information for our Students' Number to the announcement that the date of publication is September 3rd. It will be essential for particulars intended for publication in the Students' Number to reach THE LANCET Office not later than Tuesday, the 30th inst. Communications should be addressed to the Sub-editor, THE LANCET Office, Strand.

A NEW SOURCE OF TITLES.

TITLES have generally proceeded from sovereigns, popes, universities, or other distinguished quarters; but some of our brethren in Victoria are impatient with the limitations and restrictions with which titles from such quarters are granted. The *Sydney Morning Herald* reports that at a meeting of the Victoria branch of the British Medical Association a motion was proposed that "as the title 'Dr.' by the custom of the people had become the recognised title of legally qualified practitioners in the colony of Victoria, the members of this branch consider it should be officially allowed to such practitioners." This resolution—the debate on which was adjourned—is scarcely worthy of the Victoria branch. The title "Dr." is applied to many other persons than medical practitioners. As far as it rests on the mere custom of the people as applied to medical men it needs no further recognition. It is generally used without distinction or reflection. It is not on such grounds that any grave change in the law of titles is to be advocated.

F.R.C.S.—We are of opinion that it would tell against our correspondent's own interests to send in an account to the body mentioned unless some intimation has been made that his charges would be met by them. If our correspondent can get someone to move in his behalf all well and good. Under the latter circumstances it is more than likely that a favourable consideration would be given to the matter. We cannot advise what the charges should be, but we may suggest that they should bear a proper relation to the class of patient attended.

THE CAPE FOR PHTHISIS.

To the Editors of THE LANCET.

SIRS,—I am sending a young lady to winter at the Cape. She leaves at the end of September, and by force of circumstances she is obliged to travel alone, unless she could meet with any lady going out. Would any brother practitioner knowing of a lady who is going to the Cape kindly communicate with me? My patient is twenty-five years old, and a lady in every sense of the word. Further, would anyone better informed than myself tell me which is the best place in the Cape Colony for a patient threatened with phthisis? Indeed, any information will be most gratefully acknowledged.—I am, Sirs, yours truly,

G. HAY REYNOLDS, M.B.

9, Frognal, Hampstead, N.W., Aug. 23rd, 1892.

THE POST OF PORT SURGEON AT ADEN.

WE have had an opportunity of perusing copies of a correspondence relative to a medical officer of the Bombay medical establishment having been superseded, without any reason being assigned, in the appointment of port surgeon of Aden, a post in which he had acted for three years. The medical officer very naturally appealed to the Government of Bombay through the head of his department, requesting that their decision in this respect might be reconsidered. To this official letter, forwarded through the proper channel, no reply of any kind has been given, which is, to say the least of it, of very unusual occurrence in official correspondence. It appears that the medical officer concerned took over charge of the duties of port surgeon at Aden in March, 1883, and continued to act in that appointment until April, 1888. During these three years he fulfilled the duties of his post efficiently and without unpleasant incidents, correspondence or friction of any kind. About the beginning of April, 1888, however, this officer forwarded a complaint from one of his hospital subordinates regarding the establishment of a house of ill fame at Steamer Point, in close proximity to the European General Hospital, where it was overlooked by the quarters of the apothecary and his wife, with a communication from himself in which he very properly called the attention of the political resident to the subject in terms befitting the nature of it. The reply to this was of an arbitrary kind, but the Political Resident subsequently visited the premises and the apothecary made good his complaint. The next step taken was the appointment of another officer to the post of port surgeon, and no explanation for the adoption of this course was or has ever been given, nor has any reply to the official protest against it been vouchsafed.

Mr. Charles Hewes.—It would be better to apply directly to the various examining bodies for copies of regulations and for other information desired. We cannot assume the responsib'lity of answering the invidious questions asked.

COMPENSATION TO MEDICAL WITNESSES.

To the Editors of THE LANCET.

SIRS,—As the question of compensation to medical witnesses is now receiving some public attention, I shall be obliged if you will allow me to place before your readers the particulars of a case which has recently occurred to me.

A few weeks since the superintendent of police in my district called upon me and brought with him a child ten years of age for examination, which child, it was alleged, had been violated. I made the required examination, and I was informed by the police officer that I would obtain a fee for so doing. A few days after he called again and asked me to write a full report of the condition of the child, for which, he said, I would receive a guinea. The case was then sent forward to the assizes, and I was summoned as a medical witness. The assize town is ten miles distant, and I had to drive there, and was kept on the day of trial from 10 A.M. until 5 P.M. The entire remuneration I was ordered by the Court for my first examination, my subsequent written report, and my attendance at the assizes amounted to a sum of £1 6*s.* When I returned home on the day of trial I had to drive some eight miles to see patients—cases of urgency—so that my day's work had not concluded until 1 A.M. the following morning. It seems hardly necessary for me to comment further on the inadequacy of the remuneration awarded to me in this instance to cover my time and the expense I had to incur; but I may say that if in future any such cases should be brought to me by the police I shall, if I have the option, decline to have anything to do with them. I am, Sirs, yours faithfully,

August, 1892. VICTIM.

THE CAUSE OF QUACKERY.

A CORRESPONDENT of the *Sydney Morning Herald* discusses the cause and cure of quack doctors, of which he says there are more in Sydney than in all London. He has arrived at a singular conclusion—viz., that the reason why quacks abound is that medical men charge too highly for their advice and medicines. We gather from his letter that the lowest charge for a visit is half a guinea. It is always pleasant to conclude that you have discovered an explanation of a complicated fact, especially if it is simple and to be expressed in a single sentence. But such easy theories are always to be suspected. And we think this is the case here. Quacks are not so accommodating in their charges as regular medical men. It is notorious that the poor will find large sums to buy a quack medicine with or to pay a bonesetter, who would have no money to spare for a regular practitioner. Certainly this explanation will not hold in England, where there is plenty of quackery, impudent and costly, that claims pounds where practitioners would be content with shillings. There are quacks because people like to be promised impossible things in an impossible space of time.

Mr. George Foy will see that the report in question received detailed notice at our hands in last week's issue of THE LANCET.

THE MORBUS PEDICULARIS IN ANTIQUITY.

NO one who has followed the successive revolutions in the history of medicine is likely to fall into the error into which the lay historian is so apt to be betrayed—the error, to wit, of assuming ancient disease, pathogenically and clinically, to be identical with its supposed modern equivalent. In many cases the resemblance between the two is superficial only, insomuch that when we descend to symptoms we are often puzzled to imagine how the same name could be applied to both. We need not enter into the *quæstio vexata* of the memorable plague at Athens as described by Thucydides. From the features of it detailed by that prince of historians subsequent writers have been led to take widely divergent views as to its character—some identifying it as small-pox, others as typhoid fever, others, again, as plague as it is occasionally met with in the East. It never occurs to these ingenious speculators that the disease may have been *sui generis*, that it may have become worn out after successive visitations, and that in its *ensemble* it is not to be identified with any organic disorder known to modern classification. Similar reflections must occur to the medical reader when perusing the comments of nineteenth-century historians as to the disease which carried off the Dictator Sulla. The Elder Pliny—who, though not himself a professional physician, any more than Celsus, was yet intimately acquainted with the best authorities in medicine, past and contemporaneous—distinctly tells us: "Phthiriasi Sulla Dictator consumptus est nascunturque in sanguine ipso animalia exesura corpus." (Sulla, the Dictator, was consumed by the lousy disease. There are, indeed, generated in the very circulation of the human subject animalcules capable of devouring the body.) From all that we know of Sulla (from the celebrated Life of him by Plutarch in particular) we are prepared to find that his constitution was broken down by every kind of debauchery, the symptoms of gouty eczema, if not of a cutaneous appearance, suggestive of secondary syphilis, having been prominent in him at a comparatively early age. When we consider the active soldier's life he led—a life not always compatible with personal cleanliness—we are at no loss to conceive that the Nemesis of his debauched habits must have been reinforced by conditions favourable not only to maladies of the *cutis vera*, but to such of these as take the form of parasitic infection. The *pediculi corporis*, oviparous as they are, might have found in his artificially prepared system the very nidus best adapted for their development and multiplication, till they acquired such a foothold in the *cutis vera* as gradually to suspend its function and become the proximate cause of death. This very reasonable view of the case seems not to have been placed before Ihne or Mommsen, the historians of Ancient Rome, or, if placed before them, not to have been understood; and in their anxiety to whitewash the successful rival of the democratic Marius they ridicule the notion that he could have died of such a disease at all—a disease which, in the opinion of Mommsen, is "entirely imaginary." Ihne is even more explicit, and while he says that "*phthiriasis* exists only in the brains of credulous writers," he maintains that "Sulla died in consequence of the rupture of a bloodvessel brought on by the irritation he felt at the dishonesty of Granius." "Rupture of a bloodvessel brought on by irritation" sounds very like the ecstatic etiology we had occasion to stigmatise in Shelley's account of the death of Keats. Much more likely to be true is the matter-of-fact statement of Pliny the Elder—a statement which Plutarch must have had every opportunity of sifting, and which harmonises with all we know of the Dictator's habits and of the undoubted recognition of phthiriasis itself in the Greek an Roman classifications of disease.

Celt.—Jervis on the Coroners Act, 1887, fifth edition, by Melsheimer, published by Stevens and Sons, 119, Chancery-lane, will, we think, afford our correspondent the information he requires.

W. M. M.—Our reply must be in the negative.

"THE FLY PLAGUE."

To the Editors of THE LANCET.

SIRS,—If "A Senior F.R.C.S." sponges his face, neck and arms with a weak infusion of quassia he may sit under his fig-tree undisturbed by gnats *et id genus omne*. I have used this for several years, and find that no (English) insects will bite or even settle on a skin so protected. The sponge used need only be damp, not thoroughly wet, with infusion; but, of course, the skin must not be *completely* dried with a towel afterwards. I am, Sirs, yours faithfully,

Rugby, Aug. 23rd, 1892. NORMAN DAVIS, M.D.

ERRATUM.—On page 444, column 2, of our last issue the heading, "Messrs. Lowtan and Sons, London," should read Messrs. *Cowtan* and Sons.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Miss Austin, Great Yarmouth; Mr. Fred. Astbury, Crediton; Messrs. Blondeau et Cie., London; Mr. Browning, Westminster; Messrs. Burgoyne and Co., London; Mr. Cecil Bateman, Kendal; Messrs. Burroughs and Wellcome, London; Dr. Edward T. Blake, London; Messrs. Bishop and Sons, London; Dr. Bobardt, London; Mr. Bouchier, Brighton; Mr. Brasier, London; Mr. Haydn Brown, Alford; Mr. J. J. Clark, West Brighton; Mr. Cornish, London; Mr. Cooper, Derby; Messrs. J. and A. Churchill, London; Mr. H. Charnwood, Oban; Surgeon-Major E. Colson; Mr. Cornish, Manchester; Mr. Cooke, London; Dr. George Carpenter, Plymouth; Mr. F. A. Davies, London; Surgeon-Major P. J. Damania, London; Mr. Darville, Buntingford; Dr. Norman Davies, Rugby; Dr. J. T. R. Davidson, Buenos Ayres; Dr. David Drummond, Newcastle; Mr. W. H. Diggs, Merrion; Mr. John C. Daniel, Hanley; Mr. Farris, Providence, U.S.A.; Messrs Fannin and Co.; Mr. T. J. Forde; Dr. J. K. Frost, Wandsworth; Mr. George Foy, Dublin; Surgeon-Major Gardner, Cheltenham; Mr. William Griffith, Denbigh; Dr. John Godson, Worcester; Dr. Gordon, North Devon; Mr. Gravatt, Cheapside; Mr. Horton, London; Mr. Walter Hall, London; Dr. C. P. Hansom, London; Messrs. Humphreys, Knightsbridge; Mr. K. T. Hewlett, London; Mr. Heywood, Manchester; Mr. Hornibrook, London; Mr. Hanley, London; Dr. C. H. McIlraith, London; Mr. C. A. James, London; Messrs. Johnson and Johnson, London; Messrs. W. and A. K. Johnstone, Edinburgh; Mr. Kershaw, London; Mr. Keely, Nottingham; Dr. J. Gordon Kelly, Leicester; Mr. Lamb, London; Col. Legge, London; Dr. Benno Lagueur, Wiesbaden; Mr. W. E. Lane, Felstead; Dr. Lloyd, South Wales; Dr. Laughton, Enfield; Mr. T. Martin, Brighton; Mr. Henry McClure, Norfolk; Dr. Mackay, Sutherlandshire; Messrs. Maythorn and Son, Biggleswade; Mr. Morton, Glasgow; Miss Minty, Parson's Green; Dr. R. D. Mothersole, Bolton; Dr. Maxwell, Woolwich Common Mr. Minto, Aberdeen; Mr. Moullin, London; Mr. Howard Marsh, London; Mr. Mann, Leith; Mr. Martin, Brighton; Dr. G. Nepven, Marseille; Surgeon-Major Pringle, London; Mr. Stephen Paget, London; Mrs. Pitt, London; Mr. Peaford, Folkestone; Mr. G. H. Reynolds, London; Mr. Arthur Read, London; Dr. G. M. Robertson, Edinburgh; Messrs. Robertson and Scott, Edinburgh; Bishop Stanley, Lichfield; Mr. W. W. E. Stables, Ashby; Mr. Henry Sewill, London; Mr. S. Smyth, Southampton; Messrs. Ch. Stanley and Son, Rotherham; Dr. F. M. Sandwith, Cairo; Dr. Solomon C. Smith, London; Mr. W. Sewell, Shipley; Dr. Richard Siseley, London; Messrs. Tapp and Jones, London; Messrs. C. Tayler and Co., London; Mrs. Turner, Finsbury-park; Dr. John Thoroughgood, London; Mr. C. W. Thies, London; Mr. Terrill, Ashford; Dr. Arthur Watson, Manchester; Dr. Wethered, London; Messrs. Whitworth and Stuart, Manchester; Mr. Williams, Hanwell; Mr. W. Spencer Watson, London; Dr. G. W. Winter, Haverstock-hill; Mr. Clarence A. Wright, Rochester; Mr. Alex. Wheeler, Darlington; Mr. J. H. Williamson, London; Dr. Warden, Birmingham; A. B. C., London; A. H. L., London; *British and Colonial Druggist*, London; Doctor, London; E., Clapham; Hon. Secretary, Cheltenham; Johannis Springs Co., London; Jack Brag, Boston; London Life Assurance; Liquor Carnis Co., London; Military Department, India Office; M. E., London; Medicus, London; North-Eastern Sanitary Inspection Association, Newcastle; Omega, London; Sigma, London; Thesis, London; Trouble, London; W., Redcar; W. C. J., Birmingham; Z., London.

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NEWSPAPERS.—*Dundee Advertiser, Sussex Daily News, Scotsman, City Press, Irish Times, Cape Times, Le Temps (Paris), Local Government Chronicle, Bradford Observer, Scottish Leader, Sheffield Independent, Leeds Mercury, Birmingham Post, Manchester Examiner, Western Daily Press, Glasgow Herald, Newcastle Leader, Windsor and Eton Express, Walton Gazette, Yorkshire Post, Surrey Advertiser, Weekly Free Press and Aberdeen Herald, Liverpool Daily Post, Western Morning News, Mining Journal, Reading Mercury, Irish Daily Independent, Insurance Record, Bristol Mercury, Windsor and Eton Gazette, Hertfordshire Mercury, Law Journal, Guy's Hospital Gazette, Science Siftings, Bedford and County Record, North Wales Chronicle, Hackney Gazette, Oldham Evening Chronicle, Cheshire City News, Maidstone Journal, Sunday Times, People, Eastern Morning News, Temperance Record, Toronto Daily Mail, Times of India, West Middlesex Advertiser, Pioneer Mail, Halifax Mercury, Derby Gazette, Bradford Daily Telegraph, &c.*, have been received.

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